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Annual Statistical Report

AMERICAN
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INSTITUTE
1988



AMERICAN IRON AND STEEL INSTITUTE
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NOTES

D—Disclosure

P—Preliminary

R—Revised

n.a.—Not available

Net ton—2,000 pounds

Gross ton—2,240 pounds

() Indicates loss or negative number.

Rounded figures do not necessarily add to totals.

Raw steel is defined as steel in the first solid state after melting suitable for further processing or sale, including ingots, steel for foundry castings and strand or pressure cast blooms, billets, slabs, or other product forms.

Raw steel production capability is defined as the tonnage capability to produce raw steel for a sustained full order book.

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SELECTED HIGHLIGHTS THE IRON AND STEEL INDUSTRY AT A GLANCE

The Selected Statistical Highlights present a ten-year trend from which comparisons of year-to-year changes may be made for those items of the industry that are indicative of the operating level and the financial status of reporting companies. In the use of the highlights, it should be recognized that there may be a difference in the universe of reporting companies for the major items in the statistical section. This is especially significant for the financial series as compared to other series; for example, the universe for financial data for 1987 and 1988 represents companies who in 1988 produced 75% of the reported raw steel production.

SELECTED STATISTICAL HIGHLIGHTS

Table 1A

Shipments, Apparent Supply, Imports & Employment

(Thousands)

Year	Steel Mill Products—Net Tons				Imports as % of U.S. Apparent Steel Supply					Steel Employment (a)
	Total Net Shipments	Less Exports	Plus Imports	U.S. Apparent Steel Supply	Total	Japan	EEC	Canada	Other	Average No. of Employees
1988	83,840	2,069	20,891	102,662	20.3	4.2	6.1	3.1	6.9	169
1987	76,654	1,129	20,414	95,940	21.3	4.5	6.0	3.8	7.0	163
1986	70,263	929	20,692	90,026	23.0	4.9	7.3	3.6	7.2	175
1985	73,043	932	24,256	96,367	25.2	6.2	7.2	3.0	8.8	208
1984	73,739	980	26,163	98,922	26.4	6.7	6.4	3.2	10.1	236
1983	67,584	1,199	17,070	83,455	20.5	5.1	4.9	2.9	7.6	243
1982	61,567	1,842	16,663	76,388	21.8	6.8	7.3	2.4	5.3	289
1981	88,450	2,904	19,898	105,444	18.9	5.9	6.1	2.7	4.2	391
1980	83,853	4,101	15,495	95,247	16.3	6.3	4.1	2.5	3.4	399
1979	100,262	2,818	17,518	114,962	15.2	5.5	4.7	2.0	3.0	453
Details on Page:	24	34	44		47	47	47	47	47	15

(a) Covering only those employees engaged in the production and sale of iron and steel products and excludes mining and quarrying operations, transportation, warehousing, fabrication and other non-steel producing activities.

Table 1B

Raw Steel Data

(Thousands of net tons)

Year	United States					Percent of U.S. Production				
	World Production	Production	% of World	Capability	% of capability	By Type of Furnace			By Type Cast	
						OH	BOP	Elec.	Ingots	Continuous
1988	859,539	99,924	11.6	112,000	89.2	5.1	58.0	36.9	38.6	61.3
1987	811,079 ^a	89,151	11.0	112,200	79.5	3.0	58.9	38.1	40.1	59.8
1986	788,948	81,606	10.3	127,000	63.8	4.1	58.7	37.2	44.7	55.2
1985	792,945	88,259	11.1	133,600	66.1	7.3	58.8	33.9	55.5	44.4
1984	782,590	92,528	11.8	135,300	68.4	9.0	57.1	33.9	60.3	39.6
1983	730,930	84,615	11.6	150,600	56.2	7.0	61.5	31.5	67.8	32.1
1982	710,738	74,577	10.5	154,000	48.4	8.2	60.7	31.1	70.9	29.0
1981	779,399	120,828	15.5	154,300	78.3	11.1	60.6	28.3	78.2	21.6
1980	790,419	111,835	14.2	153,700	72.8	11.7	60.4	27.9	79.5	20.3
1979	824,486	136,341	16.5	155,300	87.8	14.0	61.1	24.9	82.9	16.9
Details on Page:	96	64	96		67	64	64	64	65	65

SELECTED FINANCIAL HIGHLIGHTS

Table 1C

Income Data

(Millions of Dollars)

Steel Segment Results			
Net Income			
Year	Net Sales	Amount	% of Net Sales
1986	\$32,318	\$(559)	\$(1.7)
1987 ^R	26,933	1,077	4.0
1986	24,875	(4,150)	(16.7)
1985	28,272	(1,834)	(6.5)
1984	30,005	(31)	(0.1)
1983	24,463	(2,231)	(9.1)
1982	28,239	(3,384)	(12.0)
1981	43,109	1,653	3.8
1980	37,163	681	1.8
1979	40,373	806	2.0
Details on Page: 10	10	10	10

Table 1D

Cash Flow Data

(Millions of Dollars)

Steel Segment Results				
Year	Capital Expend.	Net Cash Provided (Used) from		Inc. (Dec.) In Cash & Mkt. Secs.
		Operations	Financing	
1988	\$1,836	\$ 727	\$ 410	\$ 316
1987 ^R	1,164	725	541	184
1986	862	1,439	1,239	200
1985	1,641	(427)	353	(74)
1984	1,203	(428)	296	(132)
1983	1,850	(1,858)	1,556	(302)
1982	2,258	(1,990)	1,766	(224)
1981	2,371	689	(692)	(3)
1980	2,651	(748)	602	(146)
1979	2,469	(436)	221	(216)
Details on Page: 12	12	12	12	12



FINANCIAL STATISTICS

Financial data for 1987 and 1988 includes companies which made up 75% of the reported total raw steel production of the entire industry in 1988. Other years are based on results of companies representing varying percentages of the entire industry.

The financial tables included are for the Steel Segments of the businesses only. These statements representing the steel industry are statistical only, since the allocation of some items on the balance sheet, such as long term debt, deferred taxes and equity between steel and non-steel operations, requires each participating company to exercise judgment based on its individual facts and circumstances.

Table 2
Income Statement
Steel Segment

(Millions of Dollars)

	1988	1987 ^a	1986	1985	1984	1983	1982	1981	1980	1979
REVENUES:										
Sales (Net billing value of products shipped and other services)	\$32,317.6	\$26,932.7	\$24,875.2	\$28,272.3	\$30,005.2	\$24,462.8	\$28,238.6	\$43,109.3	\$37,162.7	\$40,373.1
Interest, dividends and other income	199.1	154.2	160.8	162.2	328.1	514.8	492.0	653.8	583.7	418.4
Total Revenue	32,516.7	27,086.9	25,036.0	28,434.4	30,333.3	24,977.6	28,730.6	43,763.1	37,746.4	40,791.5
COSTS:										
Employment Costs	8,776.0	7,762.4	7,543.7	8,822.3	9,334.5	8,650.8	12,199.4	15,165.2	13,826.2	14,117.9
Materials, supplies, freight and other services, etc.	18,866.5	16,083.3	15,364.1	18,034.2	18,779.7	15,664.6	17,181.9	24,201.9	21,181.0	23,085.2
Depreciation, depletion and amortization	1,308.5	1,294.1	1,301.1	1,343.8	1,374.7	1,290.5	1,471.6	1,617.5	1,528.1	1,482.9
Interest and other financial costs	461.1	538.5	637.0	713.4	774.3	616.5	600.0	487.4	499.3	489.1
Taxes other than income	383.1	375.9	378.7	362.7	359.9	371.2	NA	NA	NA	NA
Loss or (gain) on sales of assets	311.9	(1.4)	(45.6)	3	(309.9)	(20.0)	2,021.4	(132.0)	34.7	759.9
Loss or (gain) on provision for costs attributable to shutdown of facilities	(46.5)	170.8	631.5	966.9	112.8	1,508.1	—	—	—	—
Unusual items	81.6	(197.3)	3,813.5	77.2	77.8	24.5	(24.8)	(28.5)	—	—
Taxes on income	1,384.2	(87.9)	(448.3)	(35.4)	21.0	(720.4)	(1,335.1)	798.2	(3.9)	50.8
Total Costs	31,526.4	25,938.5	29,175.8	30,285.4	30,524.8	27,385.8	32,114.4	42,109.7	37,065.4	39,985.8
Extraordinary and other items net of taxes	(1,549.2)	(71.4)	(10.1)	16.9	161.0	177.1	NA	NA	NA	NA
Net Income	\$ (558.9)	\$ 1,077.0	\$ (4,149.9)	\$ (1,834.0)	\$ (30.5)	\$ (2,231.1)	\$ (3,383.8)	\$ 1,653.4	\$ 681.0	\$ 805.7
Percent return on Sales	(1.7)	4.0	(16.7)	(6.5)	(0.1)	(9.1)	(12.0)	3.8	1.8	2.0

Totals do not necessarily add due to rounding.

MEMO: In 1988 reporting companies represent: 74.9 million net tons of raw steel production and 58.5 million net tons of shipments of finished steel products.

Table 3
Balance Sheet
Steel Segment

(Millions of Dollars)

ASSETS	1988	1987 ^a	1986	1985	1984	1983	1982	1981	1980	1979
Current Assets:										
Cash and marketable securities	\$ 931.0	\$ 614.7	\$ 423.1	\$ 237.5	\$ 402.1	\$ 606.9	\$ 952.5	\$ 1,157.7	\$ 1,151.9	\$ 1,293.6
Receivables, less allowances	4,238.1	3,796.4	2,863.7	3,117.5	3,213.0	3,408.3	2,727.5	4,385.5	4,710.1	3,939.3
Inventories	3,786.9	3,351.5	3,045.8	3,546.2	4,216.5	3,320.7	4,034.4	5,379.4	4,693.6	5,039.6
Other Current Assets	110.9	179.1	129.7	116.8	198.8	204.7	226.5	193.7	263.3	161.0
Total Current Assets	9,067.0	7,941.6	6,462.3	7,018.0	8,030.4	7,540.6	7,940.9	11,116.3	10,818.9	10,433.5
Long-term receivables & other investments	758.4	838.9	755.8	903.1	1,047.5	1,700.0	NA	NA	NA	NA
Fixed Assets:										
Property, plant & equipment	32,076.7	31,710.1	32,614.0	33,927.7	35,198.4	34,283.2	38,518.5	38,971.2	37,716.9	36,000.5
Less—Depreciation, depletion & amortization	18,619.9	18,620.0	19,185.7	18,236.3	18,589.0	18,401.8	20,681.5	20,768.4	19,976.2	19,163.4
Net Fixed Assets	13,456.8	13,090.1	13,428.3	15,691.4	16,609.4	15,881.4	17,837.0	18,202.8	17,740.7	16,837.1
Other Assets	807.8	327.2	309.9	337.6	499.6	349.3	2,101.3	2,376.7	2,210.6	2,001.7
Total Assets	\$24,090.0	\$22,197.8	\$20,956.3	\$23,950.1	\$26,186.9	\$25,471.3	\$27,879.2	\$31,695.8	\$30,770.2	\$29,272.3
LIABILITIES AND STOCKHOLDERS' EQUITY										
Current Liabilities:										
Accounts Payable	\$ 2,407.8	\$ 2,339.0	\$ 1,658.1	\$ 2,158.1	\$ 2,261.4	\$ 2,287.6	\$ NA	\$ NA	\$ NA	\$ NA
Accrued taxes incl. Federal income taxes	528.7	566.2	403.6	508.6	485.1	385.5	NA	NA	NA	NA
Long-term debt maturing within one year	279.9	296.3	300.1	294.4	571.4	255.9	197.8	266.5	128.1	163.5
All other current liabilities	2,176.8	2,028.8	1,674.8	2,564.7	2,392.0	2,726.8	5,136.4	6,418.7	6,442.7	6,049.1
Total Current Liabilities	5,393.2	5,230.4	4,036.6	5,525.8	5,709.9	5,655.8	5,334.2	6,685.2	6,570.8	6,212.6
Long-term debt less amount maturing within one year	5,098.5	5,388.4	5,409.4	6,874.6	6,380.0	7,208.2	7,817.9	6,163.7	6,822.5	5,988.4
Deferred income tax	268.3	205.9	177.4	188.2	277.1	264.2	750.2	1,696.4	1,128.6	978.2
Liabilities attributable to shutdown of facilities	1,358.7	1,282.2	1,488.9	2,089.3	2,019.7	2,085.7	NA	NA	NA	NA
All other other long-term liabilities & reserves	9,713.6	6,981.3	7,185.9	2,087.2	2,138.2	1,809.8	2,697.3	1,759.0	1,759.5	1,749.2
Minority interest in companies not wholly owned	19.9	18.3	14.8	17.4	22.8	18.2	19.5	30.9	31.1	35.0
Total Liabilities	21,852.1	19,106.4	18,313.0	16,782.5	16,547.7	17,041.9	16,619.1	16,335.2	16,312.5	14,963.4
Redeemable preferred stock (RPS)	64.8	127.6	226.6	226.5	228.2	228.3	—	—	—	—
Stockholders' Equity	2,173.1	2,963.8	2,416.7	6,941.1	9,411.0	8,201.1	11,260.1	15,360.6	14,457.7	14,308.9
Total Liabilities RPS and Stockholders' Equity	\$24,090.0	\$22,197.8	\$20,956.3	\$23,950.1	\$26,186.9	\$25,471.3	\$27,879.2	\$31,695.8	\$30,770.2	\$29,272.3
Memo: LIFO inventory reserves included above	\$ 2,084.6	\$ 1,866.1	\$ 2,195.2	3,026.8	\$ 3,497.6	\$ 2,750.6	\$ 5,101.7	\$ 6,067.1	\$ 5,800.8	\$ 5,115.0

Table 4
Cash Flow Statement
Steel Segment

(Millions of Dollars)

	1988	1987 ^a	1986	1985	1984	1983	1982	1981	1980	1979
Cash Provided From Operations										
Net Income	\$ (558.9)	\$ 1,077.0	\$ (4,131.9)	\$ (1,803.0)	\$ (92.7)	\$ (2,235.0)	\$ (3,384.4)	\$ 1,653.8	\$ 681.4	\$ 806.6
Depreciation	1,309.6	1,295.3	1,301.1	1,343.7	1,373.0	1,292.1	1,481.2	1,636.1	1,547.2	1,502.7
Deferred Income Taxes	38.7	25.5	(485.5)	(55.4)	42.8	(722.9)	(854.4)	762.9	255.8	(144.6)
Other noncash P&L items	2,978.2	(24.6)	4,622.6	1,017.0	156.2	1,366.2	2,036.6	(39.8)	8.2	677.5
Total from earnings	3,767.7	2,373.3	1,306.3	502.2	1,479.3	(299.6)	(721.0)	4,013.0	2,492.6	2,842.2
Changes in working capital	(424.4)	(359.0)	965.8	527.1	(829.0)	(94.1)	1,677.3	(463.6)	50.0	(297.2)
Cash provided from operations	3,343.2	2,014.2	2,272.0	1,029.4	650.3	(393.7)	956.3	3,549.4	2,542.6	2,545.0
Cash provided (used) for non operating units	(7.3)	8.4	(40.6)	(115.3)	(145.6)	(160.6)	63.3	(161.2)	(83.6)	(45.1)
Cash (used) for Dividends	(218.5)	(189.9)	(120.5)	(138.7)	(201.5)	(203.3)	(413.8)	(774.9)	(714.6)	(521.3)
Long Term Investments										
Additions to plant and equipment	(1,836.2)	(1,163.9)	(862.0)	(1,640.9)	(1,203.1)	(1,850.2)	(2,258.2)	(2,370.6)	(2,650.6)	(2,469.4)
Disposals of plant and equipment	159.6	81.7	505.5	293.1	210.7	48.5	602.8	166.2	227.1	51.7
Other provided (used)	(714.0)	(25.9)	(315.2)	145.6	260.9	701.0	(940.6)	279.6	(69.1)	2.7
Cash (used) from operations	(2,390.6)	(1,108.0)	(671.7)	(1,202.3)	(731.5)	(1,100.7)	(2,596.0)	(1,924.8)	(2,492.6)	(2,415.0)
Net cash provided (used) from operations	726.8	724.7	1,439.2	(426.9)	(428.3)	(1,858.3)	(1,990.2)	688.5	(748.2)	(436.4)
Cash Provided From (Used For) Financing										
Net Additions/Reduction In:										
Transfers (to) from corporate	(252.8)	(322.7)	(865.9)	(299.8)	(435.4)	46.5	(242.6)	(186.4)	(87.5)	(94.5)
Long term debt	(397.0)	(351.8)	(88.5)	504.4	62.4	524.1	1,814.7	(638.4)	805.8	244.1
Short term debt	73.9	(36.9)	(384.6)	(15.0)	524.7	51.3	106.7	121.3	(179.5)	51.8
Stock	165.5	170.3	99.9	162.9	144.4	934.1	87.2	11.5	63.3	19.1
Net cash Provided from (used for) financing	(410.4)	(541.2)	(1,239.1)	352.5	296.1	1,556.0	1,766.0	(692.0)	602.1	220.5
Increase (decrease) in cash and marketable securities	\$ 316.4	\$ 183.6	\$ 200.1	\$ (74.4)	\$ (132.2)	\$ (302.3)	\$ (224.2)	\$ (3.5)	\$ (146.1)	\$ (215.9)

EMPLOYMENT AND WAGE DATA

The data on number of employees, hours worked, employment cost, payroll cost per hour and employment cost per hour as shown on tables 5 and 6 cover those employees engaged in the operation of coke ovens, blast furnaces, steel-making furnaces and finishing mills, etc. and the sale of products thereof as reported by companies comprising about 81 % of 1988 total raw steel production.

Indexes on output per manhour in the iron and steel industry are those compiled by the United States Department of Labor, Bureau of Labor Statistics.

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Table 5
Total Employment Cost per Hour Worked--Wage Employees
(Covering those employees engaged in the production of iron and steel products)

Year	Pay for Hours Worked						Memo Average Hourly Earnings in Steel (BLS) (7)	Other Payroll Costs			Total Payroll Cost Per Hour (11)	Employee* Benefits Cost Per Hour (12)	Total Employ- ment Cost Per Hour (13)	Year
	Straight Time					Subtotal Pay For Hours Worked (6)		Pay for Holidays Not Worked (8)	Vacation Pay (9)	All Other** (10)				
	Regular (1)	Shift Diff- ential (2)	Sunday Premium (3)	Overtime Premium (4)	Premium For Work On Holidays (5)									
1988	\$13.076	\$ 151	\$ 320	\$ 915	\$ 237	\$14.699	\$14.72	\$ 231	\$1.042	\$1.851	\$17.823	\$6.825	\$24.647	1988
1987	13.034	151	302	800	242	14.529	14.54	255	1.038	399	16.221	7.486	23.707	1987
1986	13.224	157	294	671	234	14.630	14.53	301	1.109	179	16.219	7.023	23.242	1986
1985	13.023	157	244	574	274	14.272	13.98	339	1.269	117	15.997	6.815	22.812	1985
1984	12.570	158	234	514	255	13.731	13.53	312	1.135	165	15.343	5.955	21.298	1984
1983	12.548	156	255	409	259	13.627	13.40	366	968	133	15.094	7.119	22.213	1983
1982	13.012	157	375	276	235	14.055	13.96	499	2.165	089	16.808	6.973	23.781	1982
1981	12.092	171	434	432	298	13.427	13.11	350	1.601	071	15.449	4.709	20.158	1981
1980	10.971	135	377	336	295	12.114	11.84	333	1.574	156	14.177	4.274	18.451	1980
1979	9.822	121	368	427	281	11.019	10.77	247	1.230	055	12.551	3.370	15.921	1979

*Includes cost for retired employees as well as active

**Includes profit sharing, gain sharing, stock plans, etc

Table 6

Number of Employees, Hours Worked and Employment Cost

(Covering those employees engaged in the production and sale of iron and steel products)

Year	Employees Receiving Wages					Employees Receiving Salaries			All Employees Receiving Wages and Salaries					Year
	Average Number of Em- ployees	Total Hours Worked (000)	Avg. Hrs. Worked Per Week Per Em- ployee	Em- ployment Cost (millions)	Total Employment Cost Per Hour	Average Number of Em- ployees	Total Hours Worked (000)	Em- ployment Cost (Millions)	Average Number of Em- ployees	Total Hours Worked (000)	Avg. Hrs. Worked Per Week Per Em- ployee	Em- ployment Cost (Millions)	Total Employment Cost Per Hour	
1988	125,289	271,053	41.4	\$6,680.7	\$24,647	43,608	92,344	\$2,514.5	168,898	363,397	41.2	\$9,195.2	\$25,304	1988
1987	120,865	261,631	41.5	6,202.5	23,707	42,473	92,509	2,378.0	163,338	354,140	41.6	8,580.4	24,229	1987
1986	128,418	259,173	38.7	6,023.8	23,242	46,965	96,719	2,362.9	174,783	355,892	39.1	8,386.7	23,565	1986
1985	150,906	300,456	38.2	6,854.1	22,812	57,262	118,292	2,887.0	208,168	418,747	38.6	9,741.1	23,262	1985
1984	170,694	339,228	38.0	7,224.9	21,298	65,308	134,838	3,119.5	236,002	474,067	38.4	10,344.4	21,821	1984
1983	168,852	324,997	36.9	7,219.1	22,213	73,893	149,814	3,459.4	242,745	474,811	37.5	10,678.5	22,490	1983
1982	198,477	345,093	33.3	8,206.6	23,781	90,960	180,535	4,197.9	289,437	525,628	34.8	12,404.5	23,599	1982
1981	286,219	543,324	36.4	10,952.4	20,158	104,695	209,373	4,626.7	390,914	752,697	36.9	15,579.1	20,698	1981
1980	291,483	544,220	35.7	10,041.6	18,451	107,346	213,575	4,196.1	398,829	757,795	36.3	14,237.7	18,788	1980
1979	341,931	669,045	37.5	10,651.8	15,921	111,250	225,033	3,996.0	453,181	894,078	37.8	14,647.8	16,383	1979

Memo: Net shipments (thousand net tons) for companies reporting employment data are as follows: 1988—63,807; 1987—59,071; 1986—54,352; 1985—60,482; 1984—62,158.

Table 7
BLS Index of Output Per Man-hour in the Steel Industry
(All Employees)

Year	1977 = 100.0
1988 ^a	165.3
1987 ^a	151.7
1986 ^a	141.8
1985	139.5
1984	131.3
1983	116.8
1982	90.9
1981	112.0
1980	102.9
1979	106.9
1978	108.3
Average Annual Increase* 1978-1988	4.9

*Based on least squares method.

Source: United States Department of Labor, Bureau of Labor Statistics.

NOTE: Although the output per man-hour data relate output to one input—labor time—they do not measure the specific contribution of labor, of capital, or of any other factor to production. In short, they do not reflect solely changes in the productivity of labor. Rather, they reflect the joint effect of a number of interrelated influences such as changes in technology, capital investment per worker, utilization of capacity, layout and flow of material, skill of the work force, managerial skill, and labor-management relations.

Table 8
Occupational Injury/Illness

(Covering only those employees who were engaged in the production of iron and steel products as reported by companies comprising 77% of total 1988 raw steel production)

	1988	1987	1986	1985	1984
1 Aggregate number of man-hours (millions)	346	330	330	402	462
2 OSHA recordable injuries/illnesses					
a Fatalities	17	16	22	16	21
b Lost workday cases	8,249	7,175	4,293	4,448	5,090
c Other medical treatment cases	16,646	15,950	9,240	10,037	11,180
d Total (2a through 2c)	24,912	23,141	13,555	14,501	16,291
3 Frequency rate (number of injuries/illnesses per 200,000 man-hours worked)	14,410	14,029	8,217	7,211	7,054
4 OSHA workdays lost (thousands)	130	200	147	135	145
5 Severity rate (days lost per 200,000 man-hours worked)	104	121	89	67	63

NOTE: Recordable injuries are reported as specified by the Bureau of Labor Statistics, U.S. Department of Labor pursuant to Section 24(a) of the Occupational Safety and Health Act of 1970.

The U.S. Department of Labor, Bureau of Labor Statistics issued revised record keeping guidelines for Occupational Injury and Illness effective April 1986.

Reporting companies have issued their 1987 and 1988 figures to reflect the new guidelines; therefore, results may not be comparable to past years.



SHIPMENTS—STEEL PRODUCTS

Data in this section are expressed in terms of Gross Shipments and Net Shipments. Gross shipments represent the aggregate tonnage shipped by reporting companies including steel consumed by the companies in their own construction, maintenance, repair and operations, as well as in their own manufacture of fabricated products. Net shipments eliminate tonnage duplication by deducting from the gross total those shipments from one reporting company to another reporting company for conversion, further processing or resale.

Table 9
Shipments of Steel Mill Products—1988
All Grades—(Carbon, Alloy and Stainless)

(Net tons)

Steel Products	Total Gross Shipments	Less Shipments to Reporting Companies	Total Net Shipments	Percent of Total Net Ship- ments
Ingot and steel for castings	749,998	364,589	385,409	0.5
Blooms, slabs, billets	3,191,074	1,648,825	1,542,249	1.8
Wire rods	4,099,162	50,932	4,048,230	4.8
Total Semi-Finished	8,040,234	2,064,346	5,975,888	7.1
Structural shapes (3" & over)	4,859,931	—	4,859,931	5.8
Steel piling	348,823	—	348,823	0.4
Plates—Cut Lengths	5,046,675	2,817	5,043,858	6.0
Plates—In Coils	2,792,929	508,900	2,284,029	2.7
Total Shapes and Plates	13,048,358	511,717	12,536,641	15.0
Rails—Standard (over 60 lbs.)	460,225	—	460,225	0.5
—All other	37,201	—	37,201	0.0
Railroad accessories	117,877	—	117,877	0.1
Total Rails and Accessories	615,303	—	615,303	0.7
Bars—Hot rolled	7,104,075	643,735	6,460,340	7.7
—Bar-Size light shapes	1,373,320	—	1,373,320	1.6
—Reinforcing	5,091,373	—	5,091,373	6.1
—Cold finished	1,501,036	1,573	1,499,463	1.8
Total Bars	15,069,804	645,308	14,424,496	17.2
Tool Steel	66,319	2,042	64,277	0.1

Table 9 (Continued)
Shipments of Steel Mill Products—1988
All Grades—(Carbon, Alloy and Stainless)

(Net tons)

Steel Products	Total Gross Shipments	Less Shipments to Reporting Companies	Total Net Shipments	Percent of Total Net Ship- ments
Pipe and tubing—Standard	1,255,109	16,712	1,238,397	1.5
—Oil country goods	1,154,099	24,579	1,129,520	1.3
—Line	808,150	475	807,675	1.0
—Mechanical	903,676	2,404	901,272	1.1
—Pressure	59,041	126	58,915	0.1
—Structural	177,982	22	177,960	0.2
—Pipe for piling	74,022	—	74,022	0.1
—Stainless	56,218	728	55,490	0.1
Total Pipe and Tubing	4,488,297	45,046	4,443,251	5.3
Wire—Drawn and/or Rolled	1,073,029	331	1,072,698	1.3
Black plate	283,233	—	283,233	0.3
Tin plate	2,805,932	—	2,805,932	3.3
Tin free steel	898,723	—	898,723	1.1
Tin coated sheets	81,229	—	81,229	0.1
Total Tin Mill Products	4,069,117	—	4,069,117	4.9
Sheets—Hot rolled	13,634,986	1,046,034	12,588,952	15.0
—Cold rolled	13,991,779	120,720	13,871,059	16.5
Sheets & strip—Galvanized—Hot dipped	8,121,699	6,293	8,115,406	9.7
—Electrolytic	2,134,054	198	2,133,856	2.5
—All other metallic coated	1,261,890	—	1,261,890	1.5
—Electrical	530,403	6,445	523,958	0.6
Strip—Hot rolled	1,294,434	91,822	1,202,612	1.4
—Cold rolled	950,649	9,584	941,065	1.1
Total Sheets and Strip	41,919,894	1,281,096	40,638,798	48.5
Total Shipments	88,390,355	4,549,886	83,840,469	100.0

Table 10
Shipments of Steel Mill Products—1988
By Grades—(Carbon, Alloy and Stainless)

(Net tons)

Steel Products	Carbon	%	Alloy	%	Stainless	%	Total	%
Ingots and steel for castings	147,814	0.2	227,170	5.0	10,425	0.7	385,409	0.5
Blooms, slabs, billets	1,145,236	1.5	330,977	7.3	66,036	4.2	1,542,249	1.8
Wire rods	3,929,258	5.1	61,214	1.3	57,758	3.6	4,048,230	4.8
Total Semi-Finished	5,222,308	6.7	619,361	13.6	134,219	8.5	5,975,888	7.1
Structural shapes (3" & over)	4,841,286	6.2	18,645	0.4	—	—	4,859,931	5.8
Steel piling	348,823	0.4	—	0.0	—	—	348,823	0.4
Plates—cut lengths	4,527,343	5.8	399,977	8.8	116,538	7.3	5,043,858	6.0
—in coils	2,208,284	2.8	9,405	0.2	66,340	4.2	2,284,029	2.7
Total Shapes and Plates	11,925,736	15.3	428,027	9.4	182,878	11.5	12,536,641	15.0
Rails								
Standard (over 60 lbs.)	460,225	0.6	—	—	—	—	460,225	0.5
All other	37,201	0.0	—	—	—	—	37,201	0.0
Railroad accessories	117,877	0.2	—	—	—	—	117,877	0.1
Total Rails and Accessories	615,303	0.8	—	—	—	—	615,303	0.7
Bars								
Hot rolled	4,725,401	6.1	1,698,056	37.3	36,883	2.3	6,460,340	7.7
Bar-size light shapes	1,373,320	1.8	(Included in hot rolled bars)			—	1,373,320	1.6
Reinforcing	5,091,373	6.6	—	—	—	—	5,091,373	6.1
Cold finished	1,166,610	1.5	229,984	5.1	102,869	6.5	1,499,463	1.8
Total Bars	12,356,704	15.9	1,928,040	42.4	139,752	8.8	14,424,496	17.2
Tool Steel	—	—	64,277	1.4	—	—	64,277	0.1
Pipe and tubing								
Standard	1,238,397	1.6	—	—	—	—	1,238,397	1.5
Oil country goods	759,880	1.0	369,640	8.1	—	—	1,129,520	1.3
Line	807,675	1.0	—	—	—	—	807,675	1.0
Mechanical	563,196	0.7	338,076	7.4	—	—	901,272	1.1
Pressure	39,185	0.1	19,730	0.4	—	—	58,915	0.1
Structural	177,960	0.2	—	—	—	—	177,960	0.2
Pipe for piling	74,022	0.1	—	—	—	—	74,022	0.1
Stainless	—	—	—	—	55,490	3.5	55,490	0.1
Total Pipe and Tubing	3,660,315	4.7	727,446	16.0	55,490	3.5	4,443,251	5.3

Table 10 (continued)
Shipments of Steel Mill Products—1988
By Grades—(Carbon, Alloy and Stainless)

(Net tons)								
Steel Products	Carbon	%	Alloy	%	Stainless	%	Total	%
Wire—Drawn and/or Rolled	1,014,299	1.3	28,813	0.6	29,586	1.9	1,072,698	1.3
Black plate	283,233	0.3	—	—	—	—	283,233	0.3
Tin plate	2,805,932	3.6	—	—	—	—	2,805,932	3.3
Tin free Steel	898,723	1.2	—	—	—	—	898,723	1.1
Tin coated sheets	81,229	0.1	—	—	—	—	81,229	0.1
Total Tin Mill Products	4,069,117	5.2	—	—	—	—	4,069,117	4.9
Sheets								
Hot rolled	12,491,230	16.1	63,610	1.4	34,112	2.2	12,588,952	15.0
Cold rolled	13,067,649	16.8	18,460	0.4	784,950	49.5	13,871,059	16.5
Sheets and strip								
Galvanized								
Hot dipped	8,115,406	10.4	—	—	—	—	8,115,406	9.7
Electrolytic	2,133,856	2.7	—	—	—	—	2,133,856	2.5
All other metallic coated	1,261,890	1.6	—	—	—	—	1,261,890	1.5
Electrical	10,969	0.0	512,989	11.3	—	—	523,958	0.6
Strip								
Hot rolled	1,086,600	1.4	106,543	2.3	9,469	0.6	1,202,612	1.4
Cold rolled	671,109	0.9	54,267	1.2	215,689	13.6	941,065	1.1
Total Sheets and Strip	38,838,709	50.0	755,869	16.6	1,044,220	65.8	40,638,798	48.5
Total Net Shipments	77,702,491	100.0	4,551,833	100.0	1,586,145	100.0	83,840,469	100.0
Shipments to reporting companies	4,167,315	—	168,684	—	213,887	—	4,549,886	—
Total Gross Shipments	81,869,806	—	4,720,517	—	1,800,032	—	88,390,355	—

Table 11
Net Shipments of Steel Mill Products—All Grades
(Thousands of net tons)

Steel Products	1988		1987		1986		1985		1984	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Ingots and steel for castings	385	0.5	381	0.5	244	0.3	256	0.4	275	0.4
Blooms, slabs and billets	1,542	1.8	1,212	1.6	1,242	1.8	1,118	1.5	1,031	1.4
Skelp	*	...	22	...	5	...	9	...	11	...
Wire rods	4,048	4.8	3,840	5.0	3,464	4.9	2,962	4.0	3,090	4.2
Structural shapes (3" & over)	4,860	5.8	4,839	6.3	4,233	6.0	4,373	6.0	3,868	5.2
Steel piling	349	0.4	280	0.4	295	0.4	326	0.5	288	0.4
Plates cut lengths	5,044	6.0	4,048	5.3	3,565	5.1	4,327	5.9	4,339	5.9
Plates in coils	2,284	2.7	**	...	**	...	**	...	**	...
Rails—Standard (over 60 lbs.)	460	0.5	351	0.5	444	0.6	679	0.9	933	1.3
—All other	37	0.0	15	...	17	...	25	...	32	...
Railroad accessories	118	0.1	62	0.1	101	0.1	121	0.2	182	0.3
Wheels (rolled and forged)	*	...	58	0.1	50	0.1	68	0.1	59	0.1
Axles	*	...	29	...	28	...	33	0.1	33	...
Bars—Hot rolled	6,460	7.7	6,048	7.9	5,648	8.0	5,698	7.8	6,070	8.2
—Bar-Size light shapes	1,373	1.6	1,190	1.6	911	1.3	1,329	1.8	1,184	1.6
—Reinforcing	5,091	6.1	4,918	6.4	4,299	6.1	4,326	5.9	4,432	6.0
—Cold finished	1,499	1.8	1,361	1.8	1,257	1.8	1,255	1.7	1,484	2.0
Tool steel	64	0.1	58	0.1	56	0.1	60	0.1	61	0.1
Pipe and tubing—Standard	1,238	1.5	969	1.3	710	1.0	855	1.1	743	1.0
—Oil country goods	1,130	1.3	919	1.2	483	0.7	1,299	1.8	1,406	1.9
—Line	808	1.0	620	0.8	604	0.9	775	1.1	775	1.0
—Mechanical	901	1.1	767	1.0	748	1.1	812	1.1	940	1.3
—Pressure	59	0.1	72	0.1	72	0.1	87	0.1	89	0.1
—Structural	178	0.2	180	0.2	177	0.3	219	0.3	270	0.4
—Pipe for piling	74	0.1	***	...	***	...	***	...	***	...
—Stainless	55	0.1	42	0.1	42	0.1	49	0.1	52	0.1
Wire—Drawn	1,073	1.3	800	1.0	802	1.1	874	1.2	963	1.3
—Nails and staples	*	...	218	0.3	205	0.3	170	0.2	147	0.2
—Barbed and twisted	*	...	49	0.1	41	0.1	38	0.1	52	0.1
—Woven wire fence	*	...	13	...	11	...	20	...	26	...
—Bale ties and baling wire	*	...	25	...	21	...	34	0.1	35	0.1

*Effective 1/1/88 these products are no longer classified as "steel mill products." Consequently comparable shipment tonnage is now included in applicable semi-finished forms or drawn wire.

**Prior to 1988 included in sheets hot rolled.

***Prior to 1988 included in structural pipe & tubing.

Table 11 (continued)
Net Shipments of Steel Mill Products—All Grades
(Thousands of net tons)

Steel Products	1988		1987		1986		1985		1984	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Black plate	283	0.3	205	0.3	216	0.3	215	0.3	286	0.4
Tin plate	2,806	3.3	2,765	3.6	2,581	3.7	2,611	3.6	2,765	3.7
Tin free Steel	899	1.1	939	1.2	935	1.3	889	1.2	945	1.3
Tin coated sheets	81	0.1	79	0.1	69	0.1	58	0.1	66	0.1
Sheets—Hot rolled	12,589	15.0	13,048	17.0	12,167	17.3	12,952	17.7	13,133	17.8
—Cold rolled	13,871	16.5	13,859	18.1	13,250	18.9	13,574	18.6	13,664	18.5
Sheets and strip—Galvanized—Hot dipped	8,115	9.7	7,660	10.0	7,224	10.3	6,850	9.4	6,100	8.3
—Electrolytic	2,134	2.5	1,432	1.9	898	1.3	697	0.9	659	0.9
—All other metallic coated	1,262	1.5	1,228	1.6	1,177	1.7	1,122	1.5	1,109	1.5
—Electrical	524	0.6	465	0.6	416	0.6	413	0.6	490	0.7
Strip—Hot rolled	1,203	1.4	657	0.9	635	0.9	586	0.8	650	0.9
—Cold rolled	941	1.1	929	1.2	920	1.3	876	1.2	1,002	1.3
Total Steel Mill Products	83,840	100.0	76,654	100.0	70,263	100.0	73,043	100.0	73,739	100.0
Carbon	77,702	92.7	68,116	88.9	62,520	89.0	64,360	88.1	65,009	88.2
Stainless and heat resisting	1,586	1.9	1,418	1.8	1,187	1.7	1,251	1.7	1,248	1.7
Alloy (other than stainless)	4,552	5.4	7,120	9.3	6,556	9.3	7,432	10.2	7,482	10.1
Total Steel Mill Product Shipments By Months*										
January	6,608		5,665		6,437		6,017		5,980	
February	6,848		5,527		5,799		5,598		6,150	
March	7,693		6,234		6,142		6,344		7,240	
April	7,082		6,312		6,283		6,425		6,472	
May	7,187		6,247		6,212		6,519		6,948	
June	7,422		6,656		6,007		6,125		6,686	
July	6,325		6,295		5,815		5,710		5,820	
August	7,035		6,364		5,364		6,064		6,033	
September	6,922		6,726		5,608		5,848		5,454	
October	6,912		7,077		5,923		6,308		6,087	
November	6,712		6,606		4,899		5,654		5,317	
December	6,738		6,977		5,199		5,821		4,867	
Total*	83,840		76,654		70,263		73,043		73,739	

*Totals include adjustments not shown in monthly figures.

Table 11 (continued)
Net Shipments of Steel Mill Products—All Grades
(Thousands of net tons)

Steel Products	1983		1982		1981		1980		1979	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Ingot and steel for castings	238	0.4	246	0.4	461	0.5	445	0.6	504	0.5
Blooms, slabs and billets	760	1.1	1,035	1.7	2,185	2.5	2,185	2.6	2,095	2.1
Skelp	5		2		18		24		35	
Wire rods	2,857	4.2	2,411	3.9	3,040	3.4	2,688	3.2	2,861	2.9
Structural shapes (3" & over)	3,364	5.0	3,313	5.4	4,929	5.6	4,861	5.8	5,303	5.3
Steel piling	258	0.4	250	0.4	282	0.3	346	0.4	293	0.3
Plates	3,816	5.6	4,146	6.7	7,441	8.4	8,080	9.6	9,035	9.0
Rails—Standard (over 60 lbs.)	611	0.9	498	0.8	907	1.0	1,085	1.3	1,122	1.1
—All other	23		19		48	0.1	53	0.1	48	0.1
Railroad accessories	177	0.3	157	0.3	304	0.4	307	0.3	457	0.4
Wheels (rolled and forged)	52	0.1	72	0.1	110	0.1	159	0.2	180	0.2
Axles	21		36	0.1	100	0.1	193	0.2	218	0.2
Bars—Hot rolled	5,129	7.6	4,757	7.7	6,890	7.8	5,961	7.1	8,493	8.5
—Bar-Size light shapes	1,070	1.6	948	1.5	1,473	1.7	950	1.1	1,466	1.5
—Reinforcing	4,275	6.3	4,049	6.6	4,612	5.2	4,684	5.6	5,303	5.3
—Cold finished	1,179	1.7	1,015	1.7	1,631	1.8	1,585	1.9	2,245	2.2
Tool steel	46	0.1	44	0.1	67	0.1	79	0.1	95	0.1
Pipe and tubing—Standard	812	1.2	962	1.5	1,858	2.1	1,773	2.1	1,952	1.9
—Oil country goods	678	1.0	1,759	2.9	4,241	4.8	3,612	4.3	2,458	2.5
—Line	623	0.9	1,093	1.8	2,047	2.3	1,793	2.1	1,569	1.6
—Mechanical	748	1.1	762	1.2	1,348	1.5	1,159	1.4	1,507	1.5
—Pressure	88	0.1	108	0.2	154	0.2	149	0.2	170	0.2
—Structural	238	0.4	301	0.5	598	0.7	569	0.7	541	0.5
—Stainless	57	0.1	41	0.1	39		41	0.1	46	
Wire—Drawn	1,010	1.5	1,003	1.6	1,440	1.6	1,392	1.7	1,918	1.9
—Nails and staples	163	0.2	123	0.2	150	0.2	173	0.2	257	0.2
—Barbed and twisted	98	0.1	65	0.1	81	0.1	70	0.1	67	0.1
—Woven wire fence	49	0.1	74	0.1	95	0.1	92	0.1	122	0.1
—Bale ties and baling wire	39	0.1	43	0.1	49	0.1	41		85	0.1

Table 11 (continued)
Net Shipments of Steel Mill Products—All Grades
(Thousands of net tons)

Steel Products	1983		1982		1981		1980		1979	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Black plate	352	0.5	319	0.5	421	0.5	504	0.6	629	0.6
Tin plate	2,925	4.4	3,018	4.9	3,490	3.9	4,166	5.0	4,604	4.6
Tin free Steel	962	1.4	918	1.5	948	1.1	978	1.1	1,003	1.0
Tin mill products—All other	69	0.1	66	0.1	68	0.1	61	0.1	75	0.1
Sheets—Hot rolled	11,619	17.2	9,052	14.7	13,451	15.2	12,116	14.5	15,995	16.0
—Cold rolled	13,781	20.4	11,132	18.1	14,396	16.3	13,313	15.9	17,284	17.2
Sheets and strip—Galvanized—Hot dipped	5,793	8.6	4,878	7.9	5,375	6.1	4,787	5.7	5,810	5.8
—Electrolytic	641	0.9	491	0.8	548	0.6	457	0.5	531	0.5
—All other metallic coated	946	1.4	694	1.1	836	0.9	722	0.9	975	1.0
—Electrical	458	0.7	445	0.7	599	0.7	601	0.7	697	0.7
Strip—Hot rolled	633	0.9	498	0.8	660	0.7	669	0.8	984	1.0
—Cold rolled	920	1.4	724	1.2	1,060	1.2	930	1.1	1,230	1.2
Total Steel Mill Products	67,583	100.0	61,567	100.0	88,450	100.0	83,853	100.0	100,262	100.0
Carbon	60,292	89.2	53,947	87.6	76,554	86.6	73,358	87.5	87,879	87.6
Stainless and heat resisting	1,137	1.7	894	1.5	1,163	1.3	1,127	1.3	1,361	1.4
Alloy (other than stainless)	6,154	9.1	6,726	10.9	10,732	12.1	9,368	11.2	11,022	11.0

Total Steel Mill Product Shipments By Months*

January	4,583	5,608	7,616	7,952	8,206
February	4,588	5,434	7,375	7,690	7,996
March	5,969	6,163	8,422	8,711	10,293
April	5,399	5,488	8,108	7,296	7,438
May	5,612	5,149	7,932	6,440	10,187
June	5,986	5,372	8,148	5,848	8,977
July	5,045	4,514	7,115	5,353	8,319
August	5,789	4,724	7,020	5,745	8,475
September	5,893	4,760	7,039	6,682	7,929
October	6,078	4,309	6,723	7,458	8,355
November	6,014	4,088	5,783	7,038	7,361
December	6,269	4,234	5,666	7,591	6,743
Total*	67,583	61,567	88,450	83,853	100,262

*Totals include adjustments not shown in monthly figures.

Table 12
Net Shipments of Steel Mill Products by Market Classifications
All Grades

(Thousands of net tons)

Market Classifications	1988		1987		1986		1985		1984	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Steel for converting and processing	8,492	10.1	7,195	9.4	5,635	8.0	5,484	7.5	5,136	7.0
Independent forgers (not elsewhere classified)	804	1.0	668	0.9	538	0.8	708	1.0	775	1.1
Industrial fasteners	402	0.5	396	0.5	427	0.6	386	0.5	455	0.6
Steel service centers & distributors	21,037	25.1	19,840	25.9	17,478	24.9	18,429	25.2	18,364	24.9
Construction, including maintenance	8,607	10.3	7,681	10.0	7,336	10.4	7,900	10.8	7,522	10.2
Contractors' products	3,495	4.2	3,337	4.4	3,278	4.7	3,330	4.6	2,631	3.6
Total	12,102	14.4	11,018	14.4	10,614	15.1	11,230	15.4	10,153	13.8
Automotive										
Vehicles, parts, etc.	12,259	14.6	11,121	14.5	11,627	16.5	12,689	17.3	12,571	17.1
Independent forgers	296	0.4	222	0.3	262	0.4	261	0.4	311	0.4
Total	12,555	15.0	11,343	14.8	11,889	16.9	12,950	17.7	12,882	17.5
Rail transportation										
Freight cars, pass. cars & locomotives	628	0.7	351	0.5	267	0.4	280	0.4	347	0.4
Rails and all other	518	0.6	407	0.5	531	0.7	781	1.0	1,091	1.5
Total	1,146	1.4	758	1.0	798	1.1	1,061	1.4	1,438	1.9
Shipbuilding and marine equipment	429	0.5	202	0.3	211	0.3	337	0.5	471	0.6
Aircraft and aerospace	37		36		39		39		37	0.1
Oil and gas industry	1,477	1.8	1,489	1.9	1,023	1.5	2,044	2.8	2,003	2.7
Mining, quarrying and lumbering	493	0.6	402	0.5	275	0.4	298	0.4	298	0.4
Agricultural										
Agricultural machinery	444	0.6	394	0.5	373	0.6	442	0.7	480	0.6
All other	124	0.1	196	0.3	228	0.3	187	0.2	193	0.3
Total	568	0.7	590	0.8	601	0.9	629	0.9	673	0.9
Machinery, industrial equipment & tools	2,798	3.3	2,277	3.0	2,076	3.0	2,271	3.1	2,886	3.9
Electrical equipment	2,459	2.9	2,373	3.1	2,113	3.0	1,869	2.6	2,365	3.2
Appliances, utensils and cutlery	1,638	2.0	1,633	2.1	1,648	2.3	1,466	2.0	1,635	2.2
Other domestic and commercial equipment	1,200	1.4	1,149	1.5	1,173	1.7	1,215	1.7	1,339	1.8
Containers, packaging and shipping materials										
Cans and closures	3,159	3.8	3,233	4.2	3,020	4.3	3,044	4.2	3,268	4.4
Barrels, drums and shipping pails	617	0.7	618	0.8	519	0.7	465	0.6	507	0.7
All other	645	0.8	521	0.7	574	0.9	580	0.8	577	0.8
Total	4,421	5.3	4,372	5.7	4,113	5.9	4,089	5.6	4,352	5.9
Ordnance and other military	192	0.2	199	0.3	228	0.3	267	0.4	242	0.3
Export (reporting companies only)	1,233	1.5	515	0.7	495	0.7	494	0.7	428	0.6
Nonclassified shipments	10,358	12.3	10,199	13.2	8,885	12.6	7,767	10.6	7,807	10.6
Total Shipments	83,840	100.0	76,654	100.0	70,263	100.0	73,043	100.0	73,739	100.0

Table 12 (continued)
Net Shipments of Steel Mill Products by Market Classifications
All Grades

(Thousands of net tons)

Market Classifications	1983		1982		1981		1980		1979	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Steel for converting and processing	4,403	6.5	3,222	5.2	5,058	5.7	4,117	4.9	5,058	5.0
Independent forgings (not elsewhere classified)	573	0.8	579	0.9	1,035	1.2	933	1.1	1,254	1.3
Industrial fasteners	440	0.7	404	0.7	648	0.7	590	0.7	934	0.9
Steel service centers & distributors	16,710	24.7	13,067	21.2	17,637	19.9	16,172	19.3	18,246	18.2
Construction, including maintenance	7,271	10.8	6,283	10.2	8,446	9.5	8,742	10.4	9,978	10.0
Contractors' products	2,703	4.0	2,287	3.7	3,230	3.7	3,148	3.8	3,745	3.7
Total	9,974	14.8	8,570	13.9	11,676	13.2	11,890	14.2	13,723	13.7
Automotive										
Vehicles, parts, etc.	12,052	17.8	9,111	14.8	12,808	14.5	11,855	14.2	18,099	18.0
Independent forgings	268	0.4	177	0.3	346	0.4	269	0.3	522	0.5
Total	12,320	18.2	9,288	15.1	13,154	14.9	12,124	14.5	18,621	18.5
Rail transportation										
Freight cars, pass. cars & locomotives	217	0.3	382	0.6	976	1.1	1,884	2.3	2,445	2.4
Rails and all other	720	1.1	638	1.1	1,186	1.3	1,271	1.5	1,666	1.7
Total	937	1.4	1,020	1.7	2,162	2.5	3,155	3.8	4,111	4.1
Shipbuilding and marine equipment	471	0.7	399	0.6	1,101	1.2	1,201	1.4	924	0.9
Aircraft and aerospace	21		30		37		53	0.1	60	0.1
Oil and gas industry	1,296	1.9	2,745	4.5	6,238	7.1	5,371	6.4	3,739	3.7
Mining, quarrying and lumbering	262	0.4	254	0.4	493	0.6	454	0.5	569	0.6
Agricultural										
Agricultural machinery	417	0.6	425	0.7	820	0.9	852	1.0	1,306	1.3
All other	282	0.4	519	0.8	409	0.5	388	0.5	665	0.7
Total	699	1.0	944	1.5	1,229	1.4	1,240	1.5	1,971	2.0
Machinery, industrial equipment & tools	2,484	3.7	2,584	4.2	4,624	5.2	4,543	5.4	5,996	6.0
Electrical equipment	2,337	3.5	2,003	3.3	2,600	2.9	2,441	2.9	2,819	2.8
Appliances, utensils and cutlery	1,618	2.4	1,337	2.2	1,775	2.0	1,725	2.1	2,140	2.1
Other domestic and commercial equipment	1,363	2.0	1,247	2.0	1,622	1.8	1,701	2.0	2,073	2.1
Containers, packaging and shipping materials										
Cans and closures	3,443	5.1	3,480	5.7	3,786	4.3	4,163	5.0	4,994	4.9
Barrels, drums and shipping pails	535	0.8	536	0.9	744	0.8	725	0.9	939	1.0
All other	554	0.8	454	0.7	762	0.9	663	0.7	839	0.9
Total	4,532	6.7	4,470	7.3	5,292	6.0	5,551	6.6	6,772	6.8
Ordnance and other military	244	0.4	203	0.3	166	0.2	177	0.2	204	0.2
Export (reporting companies only)	544	0.8	832	1.4	1,845	2.1	2,595	3.1	2,007	2.0
Nonclassified shipments	6,355	9.4	8,369	13.6	10,058	11.4	7,820	9.3	9,041	9.0
Total Shipments	67,583	100.0	61,567	100.0	88,450	100.0	83,853	100.0	100,262	100.0

Table 13
Shipments of Steel Mill Products by Market Classification—1988
All Grades

(Net Tons)

Products	Steel for Converting and Processing			Independent Forgers (Not elsewhere classified)	Industrial Fasteners	Steel Service Centers and Distributors	Construction Including Maintenance	Contractors' Products
	Total Shipments	Less Shipments to Reporting Companies	Net Shipments					
Ingots, blooms, billets, slabs	2,618,972	2,013,414	605,558	205,374	..	109,316	93,589	6,569
Wire rods	1,829,796	50,932	1,778,864	46	96,485	26,349	869,600	24,433
Structural shapes (3" & over)	56,178	..	56,178	..	..	1,054,469	2,050,813	3,637
Steel piling	..	..	..	..	..	111,161	224,345	..
Plates cut lengths & coils	1,447,354	511,717	935,637	199	8,067	2,737,938	847,823	45,020
Rails & railroad accessories	..	..	..	..	..	32,611	1,473	..
Bars—Hot rolled (including light shapes)	1,400,762	643,735	757,027	593,379	167,686	1,100,554	605,880	77,339
—Reinforcing	836,147	..	836,147	..	1,230	204,768	2,261,598	570,484
—Cold finished	20,459	1,573	18,886	2,414	7,695	364,702	1,336	5,065
Tool steel	2,042	2,042	..	..	..	..	..	..
Pipe and tubing—Standard	23,063	16,712	6,351	..	10	831,412	11,865	48,102
—Oil country goods	24,564	24,579	(15)	..	..	179,925	..	..
—Line	1,589	475	1,114	..	..	270,651	1,990	172
—Mechanical	20,189	2,404	17,785	7	134	195,403	16,319	5,952
—Pressure	443	126	317	..	..	9,869	718	334
—Structural	149	22	127	..	..	100,715	20,905	717
—Piling	..	..	..	..	..	10,067	14,463	..
—Stainless	2,785	728	2,057	..	..	17,102	1,426	124
Wire—Drawn and/or rolled	145,255	331	144,924	9	34,352	232,860	18,936	24,236
Black plate	22,607	..	22,607	..	..	82,885	11,891	43,581
Tin plate	44,149	..	44,149	..	..	192,645	(90)	233
Tin free steel	6,864	..	6,864	..	..	29,254	1	144
Tin coated sheets	34	..	34	..	..	28,132	..	376
Sheets—Hot rolled	2,902,905	1,046,034	1,856,871	..	16,215	5,576,338	454,456	274,096
—Cold rolled	1,244,398	120,720	1,123,678	..	7,941	4,312,478	67,012	809,137
Sheets and strip—Galvanized	96,272	6,491	89,781	..	22,053	2,453,079	653,317	1,385,786
—All other metallic coated	7,838	..	7,838	..	..	227,701	354,424	121,309
—Electrical	12,641	6,445	6,196	..	..	30,528	15	2,498
Strip—Hot rolled	222,359	91,822	130,537	2,617	34,380	397,017	21,175	15,496
—Cold rolled	51,953	9,584	42,369	..	6,045	116,891	1,918	29,907
Total All Grades	13,041,767	4,549,886	8,491,881	804,045	402,293	21,036,820	8,807,198	3,494,747
%	..	..	10.1	1.0	0.5	25.1	10.3	4.2

Table 13 (continued)
Shipments of Steel Mill Products by Market Classification—1988
All Grades

(Net tons)

Products	Automotive	Rail Transportation	Ship-building and Marine Equipment	Aircraft and Aerospace	Oil and Gas Industry	Mining, Quarrying and Lumbering	Agricultural	Machinery, Industrial Equipment and Tools
Ingot, blooms, billets, slabs	71,206	68,282	107	18,646	42,047	23,260	3,470	187,900
Wire rods	107,944	1,800	3,017	705	5,270	124	50,693	242,050
Structural shapes (3" & over)	11,985	37,027	168,008	232	2,584	2,368	26,381	12,577
Steel piling		2,286	64					
Plates cut lengths & coils	617,049	380,760	246,859	4,428	77,109	19,050	60,941	655,754
Rails & railroad accessories		455,395				418		
Bars—Hot rolled (including light shapes)	1,416,816	96,050	7,000	4,831	36,346	273,762	107,859	567,607
—Reinforcing		3,035			2,490	125,025	17	539
—Cold finished	104,784	709	948	1,095	4,698	4,340	16,664	173,066
Tool steel								
Pipe and tubing—Standard	4,010	1,680			132,146	143	1,729	1,839
—Oil country goods		77			821,379			
—Line		104			311,086		10	60
—Mechanical	151,093	679	70	1,251	25,437	1,887	13,899	280,397
—Pressure	27		2		942			12,915
—Structural					1,439		1,649	7,497
—Pipe for piling					3,760			
—Stainless	13	1	3	305	40			5,226
Wire—Drawn and/or rolled	23,321	409	555	98	3,905	3,888	4,125	49,282
Black plate	3,166							1,228
Tin plate	54,733						353	11,140
Tin free steel	1,294							106
Tin coated sheets	40,341							171
Sheets—Hot rolled	1,967,045	89,783	1,366	417	4,124	29,070	79,308	132,144
—Cold rolled	2,993,002	752	320	209	645	4,727	34,811	190,394
Sheets and strip—Galvanized	4,181,395	1,545		39	112		88,986	56,707
—All other metallic coated	385,187						8,325	10,475
—Electrical	288	1,391		27				10,682
Strip—Hot rolled	243,577	3,683	280	3,022	1,473	4,626	67,162	127,202
—Cold rolled	177,026	312	47	1,897	47	2	1,432	61,466
Total All Grades	12,555,302	1,145,760	428,646	37,202	1,477,079	492,690	567,814	2,798,424
%	15.0	1.4	0.5		1.8	0.6	0.7	3.3

Table 13 (continued)
Shipments of Steel Mill Products by Market Classification—1988
All Grades

(Net tons)

Products	Electrical Equipment	Appliances, Utensils, and Cutlery	Other Domestic and Commercial Equipment	Containers, Packaging and Shipping Materials	Ordnance and Other Military	Export (Reporting Companies Only)	Non- classified Shipments	Total	%
Ingot, blooms, billets, slabs	199		284	13,359	73,599	58,212	346,681	1,927,658	2.3
Wire rods	23,121	2,049	130,530	86		620	684,444	4,048,230	4.8
Structural shapes (3" & over)	1,908		282	62		12,308	1,419,112	4,859,931	5.8
Steel piling						4,436	6,531	348,823	0.4
Plates cut lengths & coils	53,480	7,340	21,973	7,408	47,293	110,755	443,004	7,327,887	8.7
Rails & railroad accessories						1,481	123,925	615,303	0.7
Bars—Hot rolled (including light shapes)	29,982	14,213	37,889	1,088	24,291	25,502	1,888,559	7,833,660	9.3
—Reinforcing	42					5,867	1,080,131	5,091,373	6.1
—Cold finished	5,054	7,489	7,497	10	9,011	4,046	759,954	1,499,463	1.8
Tool steel						1,928	62,349	64,277	0.1
Pipe and tubing—Standard	121,280		2,835			12,291	62,704	1,238,397	1.5
—Oil country goods	22					59,026	69,106	1,129,520	1.3
—Line	79		182			3,157	219,070	807,675	1.0
—Mechanical	2,681	9,617	14,892	66	4,765	15,524	143,414	901,272	1.1
—Pressure	54					2,157	31,580	58,915	0.1
—Structural	23,231		218			196	21,266	177,960	0.2
—Piling							45,732	74,022	0.1
—Stainless	477	1	14		1	659	28,041	55,490	0.1
Wire—Drawn and/or rolled	7,257	5,155	67,278	1,532	1,042	2,957	446,577	1,072,698	1.3
Black plate	1,303	2,782	17,176	86,771	590	9,253		283,233	0.3
Tin plate	2,477	5,908	8,940	2,385,412	112	99,920		2,805,932	3.3
Tin free steel	7,077	(8)	3,754	831,048		19,189		898,723	1.1
Tin mill products—all other	1,679	1,337	322	8,767		70		81,229	0.1
Sheets—Hot rolled	410,868	68,880	112,018	204,749	780	332,315	978,109	12,588,952	15.0
—Cold rolled	1,292,726	1,194,714	639,647	670,548	11,339	63,115	453,864	13,871,059	16.5
Sheets and strip—Galvanized	109,587	218,850	85,381	29,117	567	248,729	624,231	10,249,262	12.2
—All other metallic coated	581	39,726	13,415	1,473	42	55,631	35,763	1,261,890	1.5
—Electrical	335,939	10,738	2,405			49,395	73,856	523,958	0.6
Strip—Hot rolled	5,350	5,303	8,009	4,205	1,259	18,972	107,267	1,202,612	1.4
—Cold rolled	22,257	43,756	24,809	175,101	17,418	15,024	203,341	941,065	1.1
Total All Grades	2,458,711	1,637,850	1,199,750	4,420,802	192,109	1,232,735	10,358,611	83,840,469	100.0
%	2.9	2.0	1.4	5.3	0.2	1.5	12.4	100.0	

EXPORTS AND IMPORTS

The following tables, compiled from Department of Commerce report on Foreign Commerce and Navigation of the United States, give the tonnage of iron and steel products exported and imported during the period 1984-1988. Exports and imports of iron and steel products not stated by weight in the reports are necessarily omitted.

Table 14
Exports of Iron and Steel Products

(Net tons)

Products	1988	1987	1986	1985	1984
Steel Mill Products					
Ingots, blooms, billets, slabs, etc	61,430	73,543	58,885	89,708	73,536
Wire rods	10,161	8,217	5,876	4,740	8,646
Structural shapes (3" & over)	61,494	63,159	31,697	41,633	29,048
Sheet piling	428	2,552	5,729	628	3,355
Plates	119,393	85,211	69,565	82,988	88,184
Rails—Standard	4,435	6,321	1,660	1,888	3,126
—Other	3,174	3,221	2,402	4,682	8,015
Rail accessories	6,038	2,447	5,385	4,367	4,084
Wheels and axles	†	3,766	3,685	2,493	3,853
Bars—Hot rolled	78,300	66,007	45,253	62,719	82,972
Bars shapes under 3"	13,461	11,563	6,995	7,139	11,231
Concrete reinforcing bars	23,480	20,550	14,197	7,409	9,889
Cold finished bars	21,717	20,687	12,636	19,735	27,177
Tool steel	4,502	3,061	2,144	2,094	2,326
Line Pipe	13,218	5,714	10,531	12,737	17,921
Standard pipe	31,177	20,686	14,375	22,614	23,229
Oil country goods	95,057	29,746	35,619	62,211	53,067
Tubing—Pressure	11,459	6,892	4,492	6,158	5,311
—Mechanical	36,193	35,523	25,461	38,599	45,177
—Structural	2,365	3,767	1,616	4,748	6,628
Stainless pipe & tubing	6,198	8,751	3,040	6,009	7,648
Other pipe and tubing	54,723	41,077	25,916	46,243	48,445
Wire—Drawn	36,164	26,146	26,081	18,758	19,441
—Barbed, Iron or Steel	†	1,695	2,636	834	1,366
—Nails and staples	†	7,905	5,862	5,445	7,161
Black plate	139,125	73,967	70,488	32,754	38,782
Tin plate	287,403	158,998	206,286	130,027	121,472
Tin free	4,171	3,663	2,699	1,123	1,766
Sheets—Hot rolled	419,037	103,962	75,906	56,696	51,581
—Cold rolled	66,157	29,458	28,094	32,758	38,734
Sheets & strip—Galv	266,874	58,121	27,365	29,261	31,741
—Coated	66,474	62,764	52,457	42,761	55,287
—Electrical	42,996	18,116	10,122	14,132	12,922
Strip—Hot rolled	32,331	28,321	13,683	12,482	11,563
—Cold rolled	49,488	32,942	20,319	23,401	25,729
Total Steel Mill Products	2,068,623	1,128,519	929,156	931,976	980,414
Carbon	1,494,960	772,962	687,029	648,063	704,290
Alloy	488,998	271,739	193,723	228,288	235,235
Stainless	84,666	83,818	48,404	55,625	40,888

†Included in Other Steel Products

Table 14 (continued)
Exports of Iron and Steel Products

(Net tons)					
Products	1988	1987	1986	1985	1984
Other Steel Products					
Plates—Fabricated	2,485	2,296	3,088	5,633	3,573
Structural shapes—Fabricated	49,692	35,662	34,098	46,770	86,853
Sashes and frames	7,246	5,462	4,242	6,815	8,986
Wheels & Axles†	5,209				
Rails—used	42,184	56,804	77,725	109,560	58,212
Railway track material	4,648	5,774	2,812	2,843	2,550
Bolts, nuts	78,439	55,608	44,186	58,944	86,897
Architectural & ornamental work, nec.	1,668	1,472	2,552	1,765	2,207
Wire cable, rope, strand & cordage	10,519	8,358	7,465	7,149	6,478
Fabricated wire products	9,061	9,916	11,347	10,119	7,100
Wire springs	31,661	23,189	11,069	16,135	17,246
Welded wire mesh	2,292	3,356	2,627	2,415	3,079
Wire nails & staples†	11,291				
Wire barbed†	1,746				
Sheets—Fabricated	17,693	8,412	8,046	8,044	7,798
Cast steel rolls	3,608	1,880	1,243	1,471	1,438
Forgings	73,279	78,202	46,649	46,269	41,739
Chains and parts	11,672	9,054	6,846	8,129	7,760
Pipe & tube fittings	36,060	30,820	21,528	28,956	36,182
Total Other Steel Products	400,453	336,263	285,522	361,016	378,098
Total Steel Products	2,469,077	1,464,782	1,214,678	1,292,991	1,358,512
Iron Products and Ferroalloys					
Cast iron pressure pipe	25,797	20,171	16,603	8,600	12,611
Cast iron soil pipe	26,458	1,907	39,176	22,099	21,775
Cast iron fittings not malleable	4,481	4,913	5,853	6,808	10,857
Cast iron fittings malleable	4,872	4,585	3,168	3,500	4,273
Iron castings	55,970	67,197	40,473	94,419	122,374
Pig iron	71,454	50,072	47,051	31,614	56,674
Sponge iron, iron or steel powders	18,810	16,629	11,529	10,773	14,791
Ferroalloys	80,470	77,460	72,722	98,417	124,724
Total Iron Products & Ferroalloys	288,313	242,935	236,576	276,231	368,081
Grand Total	2,757,389	1,707,717	1,451,254	1,569,222	1,726,592
Iron and steel scrap	10,097,557	10,366,667	11,703,677	9,948,395	9,498,276

†Prior to 1988 included in Steel Mill Products.

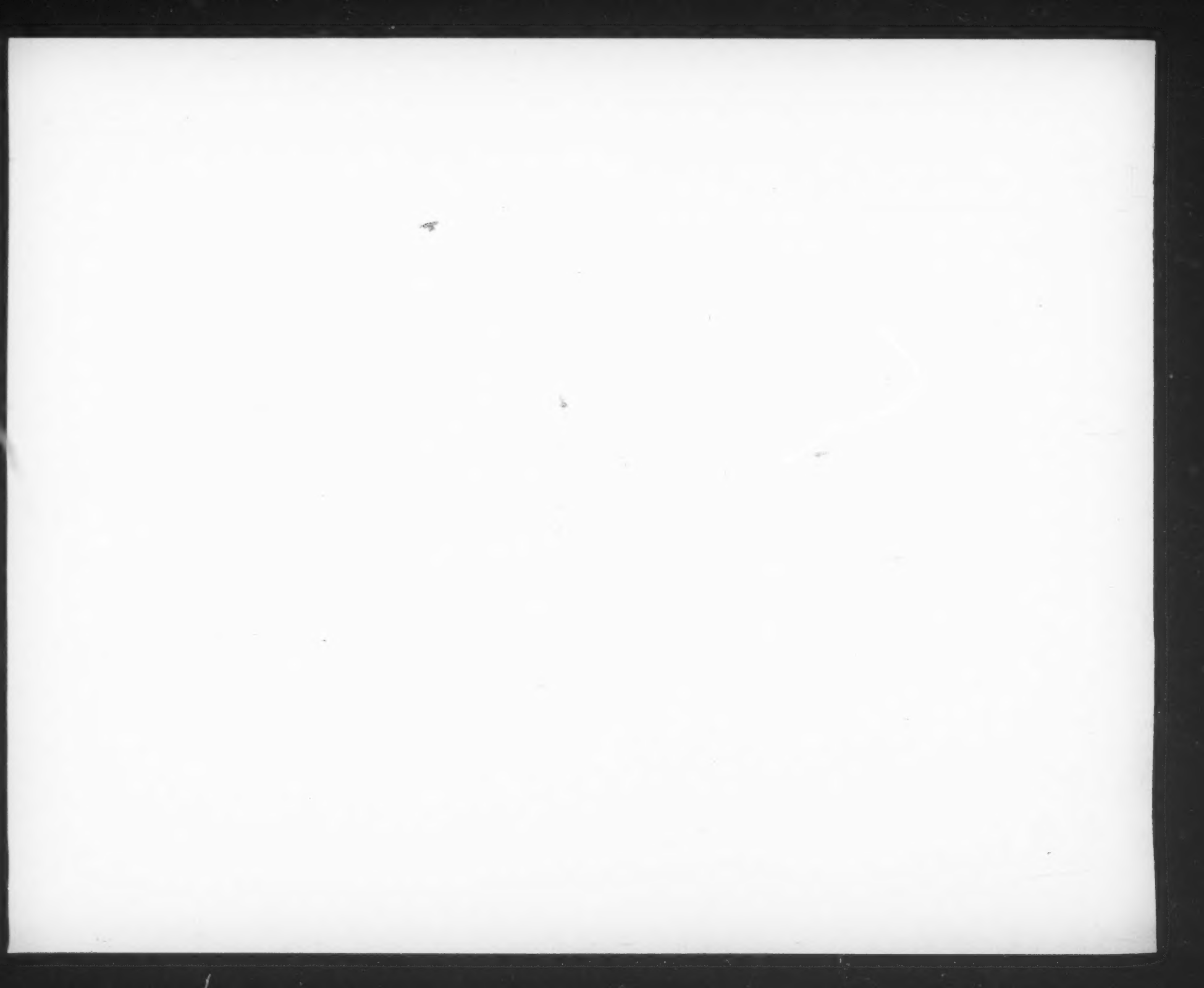


Table 15
Exports of Iron and Steel Products

(Net tons)

Products	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979
Steel Mill Products:										
Ingots, blooms, billets, slabs, etc.	61,430	73,543	58,885	89,708	73,536	102,754	362,293	540,598	912,309	357,965
Wire rods	10,161	8,217	5,876	4,740	8,646	6,137	24,961	101,774	212,347	26,903
Structural shapes and pilings	61,922	65,711	37,426	42,261	32,403	49,116	62,018	138,988	153,754	145,884
Plates	119,393	85,211	69,565	82,988	88,184	101,982	121,930	199,534	207,840	207,860
Rails and accessories	13,647	15,755	13,132	13,430	19,078	20,071	39,192	85,712	134,529	40,646
Bars and tool steel	141,460	121,868	81,225	99,096	133,595	170,052	222,608	337,463	434,068	260,244
Pipe and tubing	250,390	152,156	121,050	199,319	207,426	257,952	430,626	472,436	470,150	728,415
Wire and wire products	36,164	35,746	34,579	25,037	27,968	27,259	33,353	49,302	54,239	45,142
Tin mill products	430,699	236,628	279,473	163,904	162,020	249,556	312,017	470,810	886,482	565,953
Sheets and strip	943,357	333,684	227,946	211,491	227,557	213,698	233,269	507,176	634,965	438,923
Total Steel Mill Products	2,068,623	1,128,519	929,156	931,976	980,414	1,198,577	1,842,267	2,903,793	4,100,683	2,817,935
Other Steel Products	400,453	336,263	285,522	361,016	378,098	339,067	453,689	568,486	561,545	503,699
Total Steel Products	2,469,077	1,464,782	1,214,678	1,292,991	1,358,512	1,537,644	2,295,956	3,472,279	4,662,228	3,321,634
Iron Products and Ferroalloys	288,313	242,935	236,576	276,231	368,081	227,094	292,029	302,446	445,110	440,684
Grand Total	2,757,389	1,707,717	1,451,254	1,569,222	1,726,592	1,764,738	2,587,985	3,774,725	5,107,338	3,762,318

Table 16
Exports of Steel Mill Products

(Net tons)

Months	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979
January	89,457	65,326	86,828	65,997	86,253	94,513	173,403	255,736	197,768	192,619
February	100,219	87,135	72,764	73,275	73,074	92,122	153,543	212,903	295,675	164,693
March	113,654	83,619	73,830	76,528	79,994	88,940	197,296	260,094	276,266	216,844
April	116,333	94,357	72,371	71,252	72,687	105,754	147,572	291,048	321,393	226,446
May	124,344	114,511	61,209	84,930	90,031	100,931	194,314	259,418	337,821	236,756
June	125,891	98,864	70,194	83,233	85,895	100,182	180,094	279,433	417,941	255,187
July	128,280	84,093	67,643	81,333	89,790	108,250	145,546	217,564	398,417	233,706
August	139,352	91,445	85,591	100,855	94,076	100,123	152,434	194,438	448,915	249,507
September	206,760	98,604	102,950	63,385	76,358	99,000	158,258	228,080	400,518	244,488
October	244,207	86,113	71,825	77,090	88,558	109,868	133,356	233,084	366,179	281,453
November	242,806	114,246	87,180	73,202	61,026	114,210	105,988	244,423	315,875	226,700
December	437,323	110,208	76,770	80,894	82,645	84,459	97,370	227,490	323,827	289,312
Total*	2,068,623	1,128,519	929,156	931,976	980,414	1,198,577	1,842,267	2,903,793	4,100,683	2,817,935

*Totals include adjustments not shown in monthly figures.

Table 17
Exports of Iron and Steel Products by Countries of Destination—1988
(Net tons)

Products	Grand Total	LATIN AMERICA					Total Latin Am.
		Canada	Mexico	Venezuela	Brazil	Argentina	
Steel Mill Products							
Ingot, blooms, billets, slabs, etc.	61,430	18,314	8,857	27	18	9	15,329
Wire rods	10,161	4,668	2,399	326	3	108	3,328
Structural shapes (3" and over)	61,494	49,289	4,177	35	4	184	8,298
Sheet piling	428	91	188	—	—	—	216
Plates	119,393	39,846	45,475	715	336	45	54,330
Rails—Standard	4,435	870	524	349	—	—	3,523
—Other	3,174	830	1,542	124	—	65	1,918
Rail accessories	6,036	5,095	524	42	—	—	867
Bars—Hot rolled	78,300	39,768	22,458	50	20	82	26,312
Bar shapes under 3"	13,461	2,046	3,739	2	—	9	6,266
Concrete reinforcing bars	23,480	14,457	929	77	—	—	6,191
Cold finished bars	21,717	7,043	4,792	139	1	186	8,865
Tool steel	4,502	1,185	1,724	33	65	—	2,205
Standard pipe	31,177	8,177	4,000	281	—	14	8,383
Oil country goods	95,057	9,330	5,702	402	75	298	19,601
Line pipe	13,218	2,896	1,765	139	623	—	8,619
Mechanical tubing	36,193	21,320	5,558	79	10	45	5,840
Pressure tubing	11,459	5,741	2,401	73	6	36	4,230
Stainless pipe and tubing	6,198	2,488	1,088	114	7	7	1,946
Pipe and tubing nonclassified	54,723	15,566	10,814	124	134	41	16,186
Structural pipe and tubing	2,365	373	562	1	—	33	1,008
Wire drawn	36,164	13,944	9,567	1,241	513	11	13,912
Black plate	139,125	3,348	76,400	543	17	960	82,424
Tin plate	287,403	3,051	24,479	138	4,352	2,953	45,786
Tin free steel	4,171	35	1,468	—	4	44	1,641
Sheets—Hot rolled	419,037	22,899	41,309	204	88	39,189	83,217
—Cold rolled	66,157	24,836	16,894	173	12	79	17,595
Sheets & strip galvanized	266,874	96,510	10,615	581	159	133	19,481
Coated sheets	66,474	32,031	5,147	1,016	33	924	9,232
Electrical sheets & strip	42,996	6,885	13,858	1,193	158	687	16,342
Strip—Hot rolled	32,331	6,199	11,072	2,016	28	35	13,791
—Cold rolled	49,488	35,146	4,383	60	80	923	7,124
Total Steel Mill Products	2,068,623	494,278	344,410	10,295	6,746	47,099	514,007
Carbon	1,494,960	339,684	220,687	5,030	5,412	45,486	342,156
Alloy	488,998	135,047	96,261	2,855	1,061	1,224	138,014
Stainless	84,666	19,546	27,462	2,410	273	390	33,836

Country detail may not add to regional total because of omissions of some countries.

Table 17 (continued)
Exports of Iron and Steel Products by Countries of Destination—1988
(Net tons)

Products	EUROPE								Total Other Europe
	United Kingdom	Nether- lands	Belgium- Luxembourg	France	Fed. Rep. Germany	Italy	Spain	Total E.E.C.*	
Steel Mill Products									
Ingot, blooms, billets, slabs, etc.	6,812	58	6	394	1,876	284	13	9,843	44
Wire rods	187	76	73	47	63	1	—	460	24
Structural shapes (3" and over)	173	25	34	44	23	31	22	429	—
Sheet piling	9	—	68	—	—	—	—	76	—
Plates	1,025	14	270	139	203	4,055	101	5,853	235
Rails—Standard	—	—	—	—	—	39	—	39	—
—Other	14	—	—	—	—	—	—	14	—
Rail accessories	1	1	—	2	1	5	3	12	1
Bars—Hot rolled	242	453	16	1,614	191	231	65	3,223	2,753
Bar shapes under 3"	36	431	—	1	3,669	11	155	4,316	—
Concrete reinforcing bars	19	16	—	—	13	—	1	49	—
Cold finished bars	515	458	151	90	381	254	5	1,986	94
Tool steel	173	11	7	58	329	54	1	633	—
Standard pipe	216	1,307	220	24	20	41	89	1,934	—
Oil country goods	1,243	4,509	92	735	58	19,643	437	26,852	—
Line pipe	38	48	26	—	197	3	37	352	—
Mechanical tubing	286	116	56	49	12	5,774	2	6,318	5
Pressure tubing	46	36	1	—	13	15	22	194	—
Stainless pipe & tubing	217	93	20	34	36	31	4	447	17
Pipe and tubing nonclassified	828	1,489	213	86	202	10,603	811	14,320	35
Structural pipe and tubing	—	68	—	—	3	—	65	149	—
Wire drawn	794	53	743	123	653	81	101	2,798	40
Black plate	1,406	9	—	23	27	1,392	—	3,386	127
Tin plate	6,553	2,152	502	55	53	55,182	5,389	69,938	109
Tin free steel	1,914	—	—	—	40	—	—	1,954	—
Sheets—Hot rolled	876	67	11,442	21,429	249	5,122	33	75,564	16
—Cold rolled	593	77	528	102	713	79	216	2,329	102
Sheets & strip galvanized	3,340	108	13	9	28	138	—	3,644	—
Coated sheets	623	113	830	87	3,011	4,339	898	9,956	720
Electrical sheets & strip	891	143	110	78	568	458	257	2,505	—
Strip—Hot rolled	886	2	66	133	176	46	10	1,383	2
—Cold rolled	771	55	39	266	693	256	35	2,181	16
Total Steel Mill Products	30,726	11,988	15,526	25,624	13,520	108,167	8,770	253,136	4,339
Carbon	24,383	10,374	2,623	21,631	10,441	92,948	8,013	208,521	3,886
Alloy	4,286	986	12,177	3,298	1,945	14,471	476	38,089	357
Stainless	2,057	628	727	695	1,134	748	281	6,526	96

*Includes totals for Ireland, Denmark, Greece, & Portugal

Table 17 (continued)
Exports of Iron and Steel Products by Countries of Destination—1988
(Net tons)

Products	ASIA					OCEANIA		AFRICA	
	Peoples Republic of China	Korea Republic	China Taiwan	Japan	Total Asia	Australia	Total Oceania	Egypt	Total Africa
Steel Mill Products									
Ingot, blooms, billets, slabs, etc.	12	7 600	4 659	1 395	17 408	12	18	—	34
Wire rods	7	37	991	316	1 512	16	34	100	110
Structural shapes (3" and over)	75	354	348	185	2 584	87	112	231	723
Sheet piling	—	—	—	44	44	—	—	—	—
Plates	76	630	1 551	7 897	17 443	154	643	91	775
Rails—Standard	—	—	—	—	—	2	2	—	—
—Other	—	54	51	67	395	15	15	—	—
Rail accessories	—	15	—	2	27	2	2	32	33
Bars—Hot rolled	78	261	213	704	2 957	913	918	—	1 015
Bar shapes under 3"	—	195	13	42	624	116	117	14	29
Concrete reinforcing bars	—	3	2	36	91	9	158	268	1 586
Cold finished bars	77	70	551	290	2 331	142	148	59	380
Tool steel	—	53	27	18	371	40	65	—	34
Standard pipe	100	42	63	160	7 329	1 813	1 848	62	3 492
Oil country goods	330	21	621	66	8 659	318	348	1 729	9 062
Line pipe	6	95	276	55	1 032	29	111	71	105
Mechanical tubing	2	4	10	23	874	1 789	1 790	—	37
Pressure tubing	12	111	5	5	508	340	368	1	73
Stainless pipe and tubing	20	156	159	165	1 072	22	28	54	99
Pipe and tubing nonclassified	595	216	203	555	6 320	389	470	541	1 733
Structural pipe and tubing	—	22	17	18	551	48	52	116	231
Wire drawn	359	185	1 155	889	4 524	223	237	16	246
Black plate	22 603	209	1 116	2 046	48 051	—	—	—	790
Tin plate	4 953	1 629	12 649	6 581	125 243	—	439	32 484	40 233
Tin free steel	—	75	10	—	483	—	—	78	78
Sheets—Hot rolled	8 076	2 203	14 072	173 580	238 091	50	55	1 052	1 140
—Cold rolled	1 936	4 348	1 124	2 392	17 053	465	470	6	3 898
Sheets & strip galvanized	67 525	25 576	19 584	3 699	127 871	151	168	30	126
Coated sheets	11	276	2 260	607	12 494	931	968	453	616
Electrical sheets & strip	3 226	637	3 559	31	16 274	—	2	—	707
Strip—Hot rolled	—	175	492	9 424	10 776	9	9	71	78
—Cold rolled	110	82	1 019	384	3 006	58	65	2	1 819
Total Steel Mill Products	110 189	45 334	66 799	211 674	674 980	8 146	9 693	37 559	69 191
Carbon	101 607	37 373	48 531	112 394	486 031	3 840	4 688	35 939	84 050
Alloy	8 396	3 011	11 672	97 220	187 002	3 615	4 288	485	3 742
Stainless	185	4 950	6 597	2 060	21 957	690	717	1 136	1 390

Table 17A
Exports of Iron and Steel Products by Countries of Destination—1988
(Net tons)

Products	Grand Total	Canada	Mexico	LATIN AMERICA			Total Latin Am.
				Vene- zuela	Brazil	Argen- tina	
Other Steel Products							
Plates—Fabricated	2,485	1 163	80	21	—	2	453
Structural shapes—Fabricated	49,692	9 723	9 779	99	30	82	18,647
Sashes and frames	7,246	1 476	1 739	—	24	—	2,368
Wheels & axles	5,209	3 564	316	446	—	—	1,142
Rails—Used	42,184	672	40,067	8	—	—	41,371
Railway Track Material	4,648	1 004	534	222	231	—	1,517
Bolts, nuts	78,439	59 700	7 541	63	133	84	8,749
Architectural and ornamental work, NEC	1,868	288	35	5	236	—	933
Wire strand, rope, cables and cordage	10,519	4 336	1 980	51	2	24	3,231
Fabricated wire products	9,061	4 192	860	35	1	12	2,179
Wire springs	31,681	27 885	2 198	8	33	23	2,481
Welded wire mesh	2,292	696	173	4	—	—	629
Wire nails & staples	11,291	5 729	464	107	11	12	1,781
Wire barbed	1,748	208	116	—	—	—	607
Sheets—Fabricated	17,693	2 704	4 134	26	—	13	8,173
Cast steel rolls	3,808	2 713	348	344	—	18	831
Forgings	73,279	34 537	11 262	259	81	17	14,333
Unions and Parts	11,672	8 853	523	12	12	30	1,227
Pipe and tube fittings	36,060	18 807	3 979	190	24	44	6,804
Total Other Steel Products	400,453	188,248	86,148	1,902	812	361	118,256
Total Steel Products	2,489,077	682,526	430,558	12,197	7,558	47,480	832,263
Iron Products and Ferroalloys							
Cast iron pressure pipe	25,797	7 691	1 672	49	23	—	9,189
Cast iron soil pipe	26,458	985	116	6	—	—	14,724
Cast iron fittings not malleable	4,481	1 296	293	92	6	1	915
Cast iron fittings malleable	4,872	3 801	401	113	—	8	710
Iron castings	55,970	53 653	251	84	132	—	636
Pig iron	71,454	9 625	4 491	37	40	—	4,972
Sponge iron, iron or steel powders	18,810	6 492	3 682	580	2 289	819	7,494
Ferroalloys	80,470	29 213	7 733	374	246	224	9,220
Total Iron Products and Ferroalloys	288,313	112,756	18,639	1,334	2,736	1,052	47,859
Grand Total	2,757,390	795,282	449,197	13,531	10,294	48,532	880,112
Iron and steel scrap	10,097,557	628 054	916 397	257 913	90 090	1 333	1 543,880

Table 17A (continued)
Exports of Iron and Steel Products by Countries of Destination—1988
(Net tons)

Products	EUROPE								Sweden	Total Other Europe
	United Kingdom	Nether- lands	Belgium- Luxembourg	France	Fed. Rep. Germany	Italy	Spain	Total E.E.C.*		
Other Steel Products										
Plates—Fabricated	40	45	31	—	18	3	—	136	—	1
Structural shapes—Fabricated	3,006	93	129	147	161	21	129	3,815	52	837
Sashes and frames	925	67	1	108	28	11	24	1,371	4	202
Wheels & axles	32	—	—	45	12	2	—	110	—	115
Rails—Used	17	—	—	—	14	—	—	31	—	—
Railway Track Material	—	1	3	—	1	—	—	20	7	8
Bolts, nuts	3,256	187	270	971	792	384	47	5,971	274	556
Architectural and ornamental work, NEC	136	154	—	—	3	4	4	303	—	49
Wire strand, rope, cables and cordage	200	53	49	81	147	69	3	627	68	256
Fabricated wire products	303	85	31	211	141	85	117	1,034	8	232
Wire springs	632	51	6	35	133	34	19	919	18	71
Welded wire mesh	87	8	—	1	124	29	—	254	—	31
Wire nails & staples	565	60	165	340	77	202	45	1,558	109	199
Wire barbed-iron or steel	287	—	57	6	20	34	—	709	—	4
Sheets—Fabricated	328	68	86	24	418	77	32	1,112	51	112
Cast steel rolls	—	8	—	—	48	—	—	56	—	—
Forgings	274	145	4	165	316	102	4	1,049	75	116
Chains and Parts	256	119	28	21	63	72	30	625	—	86
Pipe and tube fittings	962	153	64	558	541	319	100	2,963	47	648
Total Other Steel Products	11,326	1,299	924	2,713	3,058	1,448	553	22,663	713	3,523
Total Steel Products	42,052	13,287	16,450	28,337	16,578	109,615	9,323	275,799	5,052	56,852
Iron Products and Ferroalloys										
Cast iron pressure pipe	50	3	—	7	4	—	677	753	244	261
Cast iron soil pipe	—	—	132	—	—	—	—	132	—	103
Cast iron fittings, not malleable	50	18	87	16	46	14	16	299	4	152
Cast iron fittings, malleable	6	13	3	—	2	41	2	69	40	51
Iron castings	159	—	4	31	37	4	2	245	2	45
Pig iron	—	—	—	—	—	38,195	—	38,195	—	15,648
Sponge iron, iron or steel powders	731	73	122	206	188	154	2	1,478	1,012	1,035
Ferroalloys	3,455	232	16,930	342	3,706	120	—	24,785	154	1,025
Total Iron Products and Ferroalloys	4,451	339	17,278	602	3,983	38,528	700	65,955	1,455	18,320
Grand Total	46,503	13,626	33,728	28,939	20,561	148,143	10,023	341,754	6,507	75,172
Iron and steel scrap	35,863	13,631	8,971	1,960	23,726	89,196	403,555	624,382	65,857	2,084,303

*Includes totals for Denmark, Ireland, Greece & Portugal.

Table 17A (continued)
Exports of Iron and Steel Products by Countries of Destination—1988

(Net tons)

Products	ASIA					OCEANIA		AFRICA	
	Peoples' Republic of China	Korea Republic	China Taiwan	Japan	Total Asia	Australia	Total Oceania	Egypt	Total Africa
Other Steel Products									
Plates—Fabricated	—	277	39	142	644	2	5	12	84
Structural shapes—Fabricated	310	789	1,696	1,139	11,982	354	999	1,903	2,689
Sashes and frames	43	386	26	198	1,569	75	113	14	128
Wheels & axles	1	4	8	2	87	13	16	—	196
Rails—Used	—	—	—	18	18	34	34	—	58
Railway track material	—	19	11	—	36	10	10	2,053	2,054
Bolts, nuts	165	60	33	693	1,667	467	565	789	1,031
Architectural and ornamental work, NEC	2	23	1	9	60	3	33	1	2
Wire strand, rope, cables & cordage	86	300	50	139	1,373	68	318	—	379
Fabricated wire products	43	139	17	237	1,223	150	181	1	19
Wire springs	11	68	3	48	275	23	24	—	6
Welded wire mesh	7	267	21	8	448	33	45	62	189
Wire nails & staples	30	46	102	479	1,498	276	366	—	180
Wire barbed iron or	7	40	13	13	199	16	19	—	—
Sheets—Fabricated	3	354	747	955	5,296	47	135	9	161
Cast steel rolls	—	—	—	6	8	—	—	—	—
Forgings	1,987	246	495	446	5,997	298	16,773	—	474
Chains and parts	—	46	92	165	584	138	172	16	125
Pipe and tube fittings	53	582	188	885	5,949	566	671	121	417
Total Other Steel Products	2,747	3,646	3,542	5,584	39,091	2,572	20,480	4,981	8,192
Total Steel Products	112,936	48,980	70,341	217,258	714,080	10,718	30,173	42,540	77,383
Iron Products and Ferroalloys									
Cast iron pressure pipe	8	34	95	434	5,140	7	81	2,596	2,703
Cast iron soil pipe	—	95	—	2	10,500	2	2	1	12
Cast iron fittings not malleable	1	82	87	84	1,575	34	60	131	185
Cast iron fittings malleable	1	9	8	43	236	3	5	—	1
Iron castings	252	212	12	505	1,227	134	139	—	26
Pig iron	—	1,331	1,139	98	2,596	19	19	—	399
Sponge iron, iron or steel powders	4	545	124	618	2,058	147	147	—	108
Ferroalloys	4	808	520	11,885	14,983	713	732	—	513
Total Iron Products and Ferroalloys	270	3,116	1,983	13,669	38,312	1,057	1,164	2,728	3,847
Grand Total	113,206	52,096	72,324	230,927	752,392	11,775	31,337	45,268	81,330
Iron and steel scrap	30,564	2,357,538	668,646	648,568	5,233,284	3,077	3,059	6	595

Table 18
Imports of Iron and Steel Products

(Net tons)

Products	1988	1987	1986	1985	1984
Steel Mill Products					
Ingots, blooms, slabs, and billets, etc.	2,844,979	2,282,654	2,084,096	2,440,368	1,515,837
Wire rods	1,493,833	1,467,030	1,357,875	1,479,176	1,589,788
Structural shapes (plain 3" & over)	1,847,287	1,778,314	1,748,604	1,978,711	2,046,630
Steel piling	112,067	109,705	107,013	139,807	108,995
Plates in cut length	1,175,461	1,096,424	1,106,904	1,377,921	1,538,495
Plates in coils ††	557,744				
Rails and track accessories	268,493	227,869	266,084	358,441	350,299
Wheels and axles	†	18,120	9,626	23,604	23,591
Concrete reinforcing bars	357,253	351,632	454,735	411,450	434,147
Bar shapes under 3"	125,687	140,469	166,369	140,318	174,788
Bars—Hot rolled	679,527	610,256	582,580	645,631	750,042
—Cold finished	235,778	213,466	224,696	314,865	328,419
Tool steel	44,095	40,599	44,749	37,142	32,054
Standard pipe	964,039	859,204	697,034	977,539	1,068,753
Oil country goods	988,194	570,440	616,743	1,497,972	2,206,595
Line pipe	552,015	550,071	817,861	1,042,356	982,669
Mechanical tubing	381,682	283,619	237,247	328,251	283,248
Pressure tubing	50,908	26,528	23,981	43,985	51,653
Stainless pipe & tubing	38,532	28,231	35,653	33,876	32,186
Structural pipe & tubing	278,870	428,758	479,768	502,112	320,691
Other pipe and tubing	28,429	23,332	28,524	37,577	475,918
Wire drawn	552,780	568,407	594,433	623,076	678,367
Bale ties & baling wire	†	1,719	696	885	2,986
Galvanized wire fencing	†	13,172	11,509	14,099	11,307
Wire nails	†	440,746	393,231	402,425	458,326
Barbed wire	†	16,643	22,157	15,336	27,729
Black plate	154,229	185,976	205,937	241,375	278,003
Tin plate	294,552	332,306	359,658	398,564	355,777
Tin free steel	97,460	101,172	110,569	145,606	104,001
Sheets—Hot rolled	2,206,599	2,515,178	2,395,926	2,785,583	3,033,150
—Cold rolled	2,105,755	2,244,958	2,692,824	2,701,645	3,594,729
—Galvanized	1,948,811	2,306,233	2,321,108	2,465,419	2,729,584
All other metallic coated	248,111	323,709	209,730	204,250	224,232
Electrical sheets & strip	73,960	69,824	81,703	118,834	89,324
Strip—Hot rolled	49,553	43,197	43,557	62,154	79,591
—Cold rolled	134,211	144,536	159,135	265,296	181,313
Total Steel Mill Products	20,890,893	20,414,493	20,692,316	24,255,651	26,163,218
Carbon	19,455,518	19,217,998	19,542,052	22,863,841	24,913,727
Alloy	1,119,418	902,082	855,078	1,120,731	986,938
Stainless	315,958	294,413	295,186	271,079	262,554

†Included in Other Steel Products

††Included in Sheets Hot Rolled prior to 1988.

Table 18 (continued)
Imports of Iron and Steel Products

(Net tons)					
Products	1988	1987	1986	1985	1984
Other Steel Products					
Structural shapes, fabricated	238,267	274,712	424,966	354,011	278,310
Shapes—Cold formed	1,302	1,107	2,178	1,951	1,770
Sashes and frames	6,104	7,996	4,394	3,085	2,785
Track Spikes†	205				
Wheels & axles†	50,734				
Fence or sign posts	864	7,926	4,930	8,731	12,317
Wire—Nonmetallic coated	6,943	6,175	1,451	1,479	1,034
Wire rope	137,112	119,691	129,449	156,473	147,820
Wire strand	173,112	176,030	177,225	176,376	184,704
Welded wire fabric	51,594	54,796	51,699	40,276	23,167
Other nails and staples	406,837	48,298	45,437	41,553	44,554
Barbed wire†	15,538				
Bale ties & baling wire	1,866	303	615	743	675
Galvanized wire fencing†	11,879				
Bolts, nuts, and rivets	710,370	692,844	638,325	626,799	674,880
Grinding balls	5,874	4,655	4,134	3,559	10,804
Blanks, nonrectangular flat rolled	139,732	84,076	47,822	36,156	13,085
Conduit	7,261	9,543	22,871	21,258	3,915
Pipe and tube fittings	132,215	102,019	106,848	129,331	110,370
Total Other Steel Products	2,097,811	1,590,170	1,662,344	1,601,783	1,510,189
Total Steel Products	22,988,704	22,004,663	22,354,660	25,857,434	27,673,407
Iron Products and Ferroalloys					
Bar iron, iron slabs and blooms, etc.	10	181	127	231	117
Cast iron soil pipe and fittings	6,730	5,568	5,297	4,164	1,729
Other cast iron pipe and fittings	21,465	18,171	16,634	38,663	14,887
Malleable cast iron pipe fittings	24,067	19,310	20,965	24,293	26,276
Castings and forgings	198,082	195,622	200,631	209,302	176,234
Pig iron	700,059	354,799	294,967	338,260	702,461
Sponge iron	194,367	61,992	97,585	103,534	175,328
Ferromanganese (manganese content)	535,240	367,651	388,093	361,884	320,790
Ferrosilicon (silicon content)	131,179	229,164	218,576	152,436	96,302
Ferrochromium (chromium content)	465,560	325,197	387,867	331,013	242,723
Other ferroalloys	293,790	254,049	252,399	211,327	117,820
Total Iron Products and Ferroalloys	2,670,548	1,831,704	1,883,140	1,775,108	1,874,666
Grand Total	25,659,253	23,836,367	24,237,800	27,632,542	29,548,073
Iron and Steel Scrap	1,037,822	842,976	723,562	611,358	577,251

†Prior to 1988 included in steel mill products.

Table 19
Imports of Iron and Steel Products

(Net tons)

Products	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979
Steel Mill Products										
Ingots, blooms, billets, slabs, etc	2,844,979	2,282,654	2,084,096	2,440,368	1,515,837	822,483	716,588	790,062	155,343	344,693
Wire rods	1,493,833	1,467,030	1,357,875	1,479,176	1,589,788	1,185,291	941,390	888,442	829,259	985,414
Structural shapes and piling	1,959,354	1,888,019	1,855,617	2,118,518	2,155,625	1,558,275	1,598,340	2,075,508	1,828,966	1,984,782
Plates	1,733,205	1,096,424	1,106,904	1,377,921	1,538,495	1,103,199	1,619,527	2,447,688	2,059,713	1,819,812
Rails and accessories	268,493	245,989	275,710	382,045	373,890	159,353	340,272	318,569	414,076	313,223
Bars and tool steel	1,442,340	1,356,422	1,473,129	1,549,406	1,719,450	975,713	793,051	986,081	859,989	1,127,414
Pipe and tubing	3,282,669	2,770,183	2,936,811	4,463,668	5,421,713	2,862,061	5,249,948	6,568,556	3,776,535	2,920,019
Wire and wire products	552,780	1,040,687	1,022,026	1,055,821	1,178,715	872,187	625,303	723,975	714,874	827,257
Tin mill products	546,241	619,454	676,164	785,545	737,781	523,125	337,903	386,255	377,542	344,851
Sheets and strip	6,767,000	7,647,635	7,903,983	8,603,181	9,931,923	7,008,209	4,440,210	4,713,204	4,478,673	6,850,670
Total Steel Mill Products	20,890,893	20,414,493	20,692,316	24,255,651	26,163,218	17,069,895	16,662,532	19,898,340	15,494,970	17,518,135
Other Steel Products	2,097,811	1,590,170	1,662,344	1,601,783	1,510,189	1,068,782	1,025,177	1,080,715	1,016,709	1,149,511
Total Steel Products	22,988,704	22,004,663	22,354,660	25,857,434	27,673,407	18,138,677	17,687,709	20,979,055	16,511,679	18,667,646
Iron Products and Ferroalloys	2,670,548	1,831,704	1,883,140	1,775,108	1,874,666	1,862,707	1,082,293	1,650,325	1,366,341	1,658,908
Grand Total	25,659,253	23,836,367	24,237,800	27,632,542	29,548,073	19,301,384	18,770,002	22,629,380	17,878,020	20,326,554

Table 20
Imports of Steel Mill Products

(Net tons)

Months	1988	1987	1986	1985	1984	1983	1982	1981	1980	1979
January	1,818,462	1,499,757	1,748,205	2,661,496	2,081,905	1,097,621	1,968,663	1,281,332	1,265,093	1,264,346
February	1,916,336	1,851,641	2,042,595	2,047,766	2,160,912	1,156,903	1,600,300	1,234,087	1,666,905	1,329,115
March	1,844,159	1,807,351	1,963,629	2,028,519	2,225,055	1,113,127	1,355,969	1,141,878	1,119,981	1,095,893
April	1,533,249	1,522,164	1,597,645	1,908,639	2,215,824	1,182,177	1,029,288	1,760,883	1,249,874	1,071,955
May	1,936,103	1,898,451	1,625,683	1,954,680	1,997,669	1,352,954	1,695,850	1,772,326	1,614,653	1,654,757
June	1,978,649	1,696,595	1,732,361	2,360,744	1,775,968	1,296,840	1,783,632	1,665,347	1,202,689	1,365,619
July	1,613,714	1,722,931	2,059,421	1,577,020	2,655,913	1,410,816	1,113,031	1,663,042	1,079,040	1,514,423
August	1,782,918	1,623,670	1,529,357	2,028,485	2,515,952	1,617,273	1,450,515	2,226,364	1,374,121	1,783,935
September	1,648,473	1,600,123	1,586,335	2,539,131	2,181,795	1,521,966	1,190,779	1,747,583	1,063,755	1,640,695
October	1,552,624	1,650,893	1,359,103	1,302,521	1,985,702	1,755,164	1,145,847	1,871,511	1,141,939	1,603,188
November	1,846,332	1,812,419	1,926,933	1,699,656	2,208,978	1,835,197	1,258,423	1,921,117	1,179,301	1,651,951
December	1,419,874	1,728,500	1,521,047	2,146,995	2,157,543	1,729,858	1,090,494	1,612,870	1,533,920	1,542,258
Total*	20,890,893	20,414,493	20,692,316	24,255,651	26,163,218	17,069,895	16,662,532	19,898,340	15,494,970	17,518,135

*Totals include adjustments not shown in monthly figures.

Table 21
Imports of Steel Mill Products By Countries of Origin
(Net Tons)

	1988			1987			1986			1985			1984		
	Net Tons	% Total	% U.S. Apparent Supply**	Net Tons	% Total	% U.S. Apparent Supply**	Net Tons	% Total	% U.S. Apparent Supply**	Net Tons	% Total	% U.S. Apparent Supply**	Net Tons	% Total	% U.S. Apparent Supply**
Canada	3,172,825	15.2	3.1	3,670,139	18.0	3.8	3,203,059	15.5	3.6	2,868,279	11.8	3.0	3,167,308	12.1	3.2
Mexico	471,209	2.3	0.5	487,361	2.4	0.5	431,394	2.1	0.5	271,794	1.1	0.3	796,812	3.0	0.8
Brazil	1,369,041	6.6	1.3	1,103,094	5.4	1.1	1,098,164	5.3	1.2	1,701,348	7.0	1.8	1,460,848	5.6	1.5
Argentina	534,406	2.6	0.5	330,906	1.6	0.3	170,259	0.8	0.2	191,094	0.8	0.2	300,174	1.1	0.3
Total Latin America	2,602,348	12.5	2.5	2,181,926	10.7	2.3	1,962,877	9.5	2.2	2,624,705	10.8	2.7	3,132,081	12.0	3.2
United Kingdom	815,296	3.9	0.8	745,241	3.7	0.8	702,957	3.4	0.8	611,546	2.5	0.6	476,229	1.8	0.5
Netherlands	554,534	2.7	0.5	491,461	2.4	0.5	498,080	2.4	0.6	577,872	2.4	0.6	446,355	1.7	0.5
Belgium-Luxembourg	852,527	4.1	0.8	762,364	3.7	0.8	985,372	4.8	1.1	1,061,421	4.4	1.1	921,036	3.5	0.9
France	1,243,815	6.0	1.2	1,088,406	5.3	1.1	1,205,506	5.8	1.3	1,596,266	6.6	1.7	1,126,512	4.3	1.1
West Germany	1,880,037	9.0	1.8	1,775,706	8.7	1.9	2,011,542	9.7	2.2	2,361,233	9.7	2.5	2,543,272	9.7	2.6
Italy	326,215	1.6	0.3	303,450	1.5	0.3	456,491	2.2	0.5	614,245	2.5	0.6	654,490	2.5	0.7
Spain	467,000	2.2	0.5	499,812	2.4	0.5	611,708	3.0	0.7	547,178	2.3	0.6	1,392,041	5.3	1.4
Total EEC*	6,226,426	29.8	6.1	5,801,787	28.4	6.0	6,613,750	32.0	7.3	6,977,433	28.8	7.2	6,334,405	24.2	6.4
Sweden	571,135	2.7	0.6	607,107	3.0	0.6	548,065	2.6	0.6	670,820	2.8	0.7	639,354	2.4	0.6
Finland	212,867	1.0	0.2	174,548	0.9	0.2	199,285	1.0	0.2	241,294	1.0	0.3	298,735	1.1	0.3
Poland	73,578	0.4	0.1	91,932	0.5	0.1	60,609	0.3	0.1	95,401	0.4	0.1	132,289	0.5	0.1
Romania	102,386	0.5	0.1	82,408	0.4	0.1	87,616	0.4	0.1	355,444	1.5	0.4	264,274	1.0	0.3
Austria	136,799	0.7	0.1	119,232	0.6	0.1	132,096	0.6	0.1	306,550	1.3	0.3	326,120	1.2	0.3
Turkey	284,354	1.4	0.3	407,413	2.0	0.4									
Total Europe	8,024,561	38.4	7.0	7,626,415	37.3	8.0	8,051,876	38.9	8.9	9,765,363	40.3	10.2	9,962,748	38.1	10.1
Japan	4,290,289	20.5	4.2	4,321,042	21.2	4.5	4,422,244	21.4	4.9	5,974,508	24.6	6.2	6,630,005	25.3	6.7
Korea Republic	1,307,185	6.3	1.3	1,295,890	6.3	1.4	1,525,305	7.4	1.7	1,899,043	7.8	2.0	2,234,331	8.5	2.3
China-Taiwan	235,191	1.1	0.2	252,556	1.2	0.3	475,835	2.3	0.5	217,725	0.9	0.2	160,118	0.6	0.2
Republic of So. Africa				24,596	0.1		499,590	2.4	0.6	411,062	1.7	0.4	556,545	2.1	0.6
Total Asia & Africa	6,728,563	32.2	6.6	6,735,596	33.0	7.0	7,266,080	35.1	8.1	8,001,485	36.3	9.1	9,665,397	37.0	9.8
Oceania	362,597	1.7	0.3	200,417	1.0	0.2	208,423	1.0	0.2	195,819	0.8	0.2	215,883	0.8	0.2
Total Imports of Steel Mill Products	20,890,893	100.0	20.3	20,414,493	100.0	21.3	20,692,316	100.0	23.0	24,255,651	100.0	25.2	26,163,218	100.0	26.4

*Includes total for Denmark, Ireland and Greece. Starting with 1986 it also includes Portugal.

**As developed in table 1A of this Report.

Country detail may not add to regional total because of omissions of some countries.

Table 22
Imports of Iron and Steel Products by Countries of Origin—1988
(Net tons)

Products	Grand Total	Canada	Mexico	Latin America			Total Latin America
				Vene- zuela	Brazil	Argen- tina	
Steel Mill Products							
Ingots, blooms, billets, slabs, etc.	2 844,979	103,836	63,916	49,663	721,813	22,820	861,270
Wire rods	1 493,833	360,096	58,389	8,916	59,347	...	138,103
Structural shapes—plain 3" & over	1 847,287	232,255	21,511	...	16,608	27,005	65,123
Steel piling	112,067	20,489	...	...	...	...	...
Plates in cut length	1 175,461	221,142	20,307	1,604	73,859	3,653	99,428
Plates in coils	557,744	159,108	512	5,009	12,773	35,832	54,126
Rails standard	163,312	88,258	...	...	...	...	...
Rails other	96,694	41,688	3	77	...	...	80
Rail accessories	8,487	811	1	...	...	...	1
Bars—hot rolled	679,527	321,170	13,316	...	45,423	34,107	98,937
Bars shapes under 3 inches	125,687	41,625	1,830	...	4,391	9,151	15,374
Concrete reinforcing bars	357,253	3,659	3,833	19,962	39,612	...	72,730
Bars—cold finished	235,778	64,789	3,883	...	10,945	7,724	22,552
Tool steel	44,095	8,573	346	...	1,920	42	2,307
Standard pipe	964,039	28,164	61,772	8,114	53,049	19,967	156,953
Oil country goods	988,194	130,268	39,133	31	3,421	43,206	96,792
Line pipe	552,015	31,229	25,717	9,793	649	37,932	76,402
Mechanical tubing	381,682	76,782	3,274	...	19,108	30,508	57,851
Pressure tubing	50,908	288	1,230	1,444	77	11,724	14,599
Stainless pipe & tubing	38,532	6,925	950	...	...	...	950
Pipe & tubing nonclassified	28,429	9,416	38	...	...	249	287
Structural pipe & tubing	278,870	160,015	185	129	1,419	4,606	6,895
Wire drawn	552,780	202,163	2,721	5,999	14,524	2,491	30,619
Black plate	154,229	9,562	...	...	...	2,093	2,093
Tin plate	294,552	63,032	...	508	1,956	...	2,484
Tin free steel	97,460	5,713	...	...	...	166	166
Sheets—hot rolled	2,206,599	442,906	6,967	21,444	128,153	94,608	251,171
—cold rolled	2,105,755	117,219	19,773	16,182	118,074	89,811	244,628
—galvanized-hot dipped	1,657,441	138,581	116,588	16,767	6,728	50,625	191,093
—electrolytic	291,370	12,589	7	...	6,641	818	8,015
All other metallic coated	248,111	1,177	4	2,339	60	1,217	3,716
Electrical sheets & strip	73,960	8,794	...	...	370	...	370
Strip—hot rolled	49,553	21,955	1,779	...	1,165	4,051	7,059
—cold rolled	134,211	38,543	3,226	11	16,953	...	20,193
Total Steel Mill Products	20,890,893	3,172,825	471,209	167,991	1,369,041	534,406	2,602,348
Carbon	19,455,518	2,887,290	419,924	162,169	1,271,599	522,448	2,434,944
Alloy	1,119,418	236,955	41,471	5,815	90,499	11,958	150,475
Stainless	315,958	48,580	9,815	7	6,943	...	16,929

Country total may not add to regional total because of omissions of some countries.

Table 22 (continued)
Imports of Iron and Steel Products by Countries of Origin—1988
 (Net tons)

49
IMPORTS
 Countries of Origin

Products	Europe													Total Other Europe	
	European Economic Community														
	United Kingdom	Nether- lands	Belgium	Luxembourg	France	Fed Rep Germany	Italy	Spain	Total E.E.C.*	Sweden	Finland	Austria	Turkey		
Steel Mill Products															
Ingot, blooms, billets, slabs, etc.	342,935	92,212	81,344		259,083	374,465	5,083	36,951	1,192,072	306,050	3,239	73		421,378	
Wire rods	56,104	9,905	4,466	2,331	139,550	34,277	8,843	39,237	299,164	21,623	2,237	650	126,791	189,035	
Structural shapes plain 3" & over	144,896	5,027	140,631	157,304	78,977	106,057	585	170,750	804,503	596		1,226		80,545	
Steel piling	11,182		4,332	32,408	18,460	25,196			91,578					---	
Plates cut length	31,607	5,470	126,756	947	24,047	64,502	21,625	41,387	325,332	104,165	68,157	9,512	1,605	323,328	
Plates in coils	1,209	24,985	11,209		83,458	58,174	10,029	2,689	191,754	9,317	30,708	12,132	4,341	67,173	
Rails standard	3,707		5,011	17,114	308	15,502			41,643	2,945		413		3,358	
Rails other			406	2,806	370	4,217			7,801	100		290		390	
Rail Accessories	18		60	455		36	7		576					---	
Bars—hot rolled	80,698	827	1,209	3,731	20,990	26,042	3,643	22,144	159,286	10,277	73	522		12,221	
Bars shapes under 3 inches	2,870		3,003	2,512	489	1,397	127	569	10,991	106		331		544	
Concrete reinforcing bars	782				1	105	5,459		8,347	2			102,560	138,757	
Bars—cold finished	32,225	23	297		36,204	4,566	2,929	19,665	95,910	1,951	4,009	23		6,663	
Tool steel	1,382		120		820	8,250	2,223	30	12,825	12,254	5	2,538		15,072	
Standard pipe	1,458	15,757	5,739	4,450	7,512	8,442	3,229	6,731	55,225	4,176	2,421		25,091	84,087	
Oil country goods	11,283	68	12,753	11	5,177	125,085	56,296	10,182	232,526	2,822	4,168	23,832	140	48,663	
Line pipe	3,319	193	4,286	29	20,874	63,679	11,268	231	109,875	341	5,826	154	2,617	12,837	
Mechanical tubing	4,632	715	334	144	3,267	22,532	7,329	10,914	51,569	17,336		1,578	3,663	27,451	
Pressure tubing	857	1,077	153		7,782	2,093	6,651	1,430	20,133	2,136				5,274	
Stainless pipe & tubing	1,461	346	20		2,608	1,477	2,111	500	8,523	5,253		756		6,010	
Pipe & tubing nonclassified	2,078				154	4,623	5,001	38	11,924	9				14	
Structural pipe & tubing	25	401	29		4,382	132	413		5,382	21	340	844	490	14,426	
Wire drawn	26,202	1,549	79,490	6,101	41,016	21,111	5,728	410	181,625	10,217	477	1,756	38	16,777	
Black plate	853	6,231	9,860		3,603	5,276	1,167		33,867					23	
Tin plate	520	8,498	643		21,670	36,194		3,058	70,583					14,431	
Tin free steel	239	136	442		3,934	29,668			34,419					---	
Sheets—hot rolled	10,105	216,420	37,404	2	223,630	255,242	70,843	8,600	823,870	28,176	51,945	46,554	10,479	154,292	
—cold rolled	24,527	137,293	68,897	1,838	140,864	322,876	56,545	45,334	823,587	10,446	20,307	23,511		89,061	
—galvanized-hot dipped	4,109	17,048	18,298	466	68,239	156,837	28,507	36,054	352,095	3,095	15,189	3,351	6,539	57,287	
—electrolytic		10,030	523		11,615	53,000	786	373	77,374	1,285		41		1,327	
All other metallic coated	6	172	1,719		8,158	10,944	805	1,434	23,708	1,102	1,768	6,577		9,447	
Electrical sheets & strip			173		2,010	10,161	7,543	110	20,435	8,917				8,953	
Strip—hot rolled				24		1,294	447	3,442	5,492	79		2		81	
—cold rolled		152	243		4,563	26,585	993	4,736	44,434	6,340	1,999	134		9,383	
Total steel mill products.....	815,225	54,522	619,852	232,875	1,243,815	1,880,037	326,215	487,000	6,226,426	571,135	212,867	136,799	284,354	1,798,135	
Carbon	706,443	332,396	606,980	213,476	1,148,967	1,776,341	272,093	423,245	5,769,011	425,853	200,158	121,982	284,354	1,820,509	
Alloy	90,768	21,668	8,175	19,196	57,093	87,334	40,440	15,766	340,482	104,775	3,934	13,455		126,543	
Stainless	15,984	469	4,698	2	37,765	16,363	13,682	27,987	116,952	40,507	8,775	1,363		51,023	

*Includes totals for Ireland, Denmark, Greece & Portugal.

Table 22 (continued)
Imports of Iron and Steel Products by Countries of Origin—1988
(Net tons)

Products	Asia				Total Asia	Oceania		Total Africa
	People's Republic of China	Korea Republic	China Taiwan	Japan		Australia	Total Oceania	
Steel Mill Products								
Ingots, blooms, billets, slabs, etc.		57,445		79,205	140,805	79,402	125,615	...
Wire rods	27	1,249	16,990	281,486	486,770	9,551	9,551	11,114
Structural shapes—plain 3" & over		97,305	5,678	557,556	664,700	35	35	126
Steel piling					...		...	...
Plates cut length	26	46,132	54	29,772	178,224	5,935	6,645	21,362
Plates in coils		21,475		15,453	72,013		3,262	10,287
Rails standard		1,339		28,716	30,054		...	...
Rails other		3,347	7	43,380	46,735		...	...
Rail Accessories		2,211		4,889	7,100		...	...
Bars—hot rolled	2,911	7,811	5,527	61,218	87,173	740	740	...
Bars shapes under 3 inches		8,391	23,907	22,615	57,077	76	77	...
Concrete reinforcing bars		53,765	1,597	1,795	135,761		...	...
Bars—cold finished	532	5,885	1,282	36,482	45,852	11	11	...
Tool steel	103	779		4,416	5,317		...	...
Standard pipe	8,457	282,372	46,865	89,596	545,486	8,140	8,995	5,129
Oil country goods		78,582	13,386	363,225	473,955		...	5,991
Line pipe		82,435	3,396	219,716	311,212	2,190	2,239	8,220
Mechanical tubing	7,264	40,850	21,396	63,525	163,573	395	605	3,851
Pressure tubing		2,822	882	4,675	10,614		...	...
Stainless pipe & tubing		392	6,809	8,703	16,100	23	24	...
Pipe & tubing nonclassified			102	6,548	5,788		...	...
Structural pipe & tubing	2,701	8,546	1,950	43,115	84,208	1,651	1,651	6,293
Wire drawn	9,720	8,828	6,463	83,200	117,095	4,488	4,500	...
Black plate		773	44	107,869	108,685		...	...
Tin plate		7,231		128,154	135,386	8,655	8,655	...
Tin free steel				57,162	57,162		...	...
Sheets—hot rolled		179,114	475	319,266	518,218	460	8,678	7,463
Sheets—cold rolled		179,313	76,882	529,655	797,989	16,409	33,269	...
Sheets—galvanized—not dipped		23,753	77	724,091	813,980	85,470	89,074	15,351
Sheets—galvanized-electrolytic		26,215		164,053	190,268	1,798	1,798	...
All other metallic coated		4,066	1	150,782	154,849	54,708	55,216	...
Electrical sheets & strip		1,451		33,957	35,408		...	...
Strip—hot rolled		5,767	1,423	7,599	14,788	178	178	...
Strip—cold rolled		1,543		18,411	19,954	1,659	1,759	75
Total steel mill products	31,741	1,307,185	235,191	4,290,289	6,633,300	281,975	362,597	95,283
Carbon	31,607	1,290,477	220,358	3,986,976	6,296,566	273,830	354,452	92,686
Alloy	132	5,382	6,606	241,141	254,285	8,121	8,121	2,577
Stainless	2	11,326	8,227	62,173	82,448	24	24	...

Table 22A

Imports of Iron and Steel Products by Countries of Origin—1988

(Net tons)

51
IMPORTS
Countries of Origin

Products	Grand Total	Latin America					Total Latin America
		Canada	Mexico	Vene- zuela	Brazil	Argen- tina	
Other Steel Products:							
Structural shapes, fabricated	238,267	85,158	3,313		3,379	518	7,527
Shapes—cold formed	1,302	390	88		458		546
Sashes and frames	6,104	3,299	25			24	50
Track spikes	205	169					...
Wheels & axles	50,734	41,151	23		4,553	6	4,582
Fence or sign posts	864	12	198	253	28		478
Wire—nonmetallic covered	5,943	287	4,637				4,637
Wire rope	137,112	8,447	1,406		796	1,340	4,181
Wire strand	173,112	8,110	222		4,742	16,663	21,676
Welded wire fabric	51,594	12,948	7,849	18,268	17	6	26,141
Nails and staples	406,837	76,015	3,395	1,275	2,198		15,176
Barbed wire	15,538	30	2,354		7,562		11,376
Galvanized wire fencing	11,879	2,936	7,338		261		5,386
Bale ties & baling wire	1,866	385		77			218
Bolts, nuts and rivets	710,370	80,588	7,864	317	2,729	531	11,855
Grinding balls	5,874	3,366	35		319		378
Blanks, nonrectangular flat rolled	139,732	39,676	48	40	84,905	5,079	90,461
Conduit	7,261	223					3,239
Pipe and tube fittings	132,215	4,530	6,802	5,122	5,831	503	18,258
Total Other Steel Products	2,097,811	367,721	45,598	25,352	117,779	24,670	229,163
Total Steel Products	22,988,704	3,540,546	516,807	193,343	1,486,820	559,076	2,831,511
Iron products & ferroalloys:							
Bar iron, iron slabs & blooms etc	10	...	10	...	...	...	10
Cast iron soil pipe and fittings	6,730	3,547	25	786	232	...	1,042
Other cast iron pipe and fittings	21,465	71	1,419	393	287	...	2,098
Malleable cast iron pipe fittings	24,067	345	1,890		1,572	...	3,463
Castings and forgings	198,082	23,680	11,393	20	15,091	561	27,104
Pig iron	700,059	145,366	...	...	496,916	...	496,916
Sponge iron	194,367	48,746	...	135,279	...	...	135,279
Ferromanganese (manganese content)	535,240	32,161	37,012	...	26,333	...	63,346
Ferrosilicon (silicon content)	231,179	24,095	772	39,053	77,851	12,930	130,760
Ferrochromium (chromium content)	465,560	11	3,987	...	11,142	...	15,883
Other ferroalloys	293,790	478	35,889	1,161	25,312	...	90,891
Total Iron Products & Ferroalloys	2,670,548	278,499	92,397	176,691	654,37	13,491	966,791
Grand Total	25,659,253	3,819,045	609,204	370,034	2,141,557	572,567	3,798,302
Iron and steel scrap	1,037,822	841,889	48,068	298	1	...	55,548

Country total may not add to regional total because of omissions of some countries.

Table 22A (continued)
Imports of Iron and Steel Products by Countries of Origin—1988
(Net tons)

Products	Europe														Total Other Europe
	European Economic Community														
	United Kingdom	Nether- lands	Belgium	Luxembourg	France	Fed Rep Germany	Italy	Spain	Total E.E.C.*	Sweden	Finland	Austria	Turkey		
Other Steel Products:															
Structural shapes, fabricated	3,950	108	786	122	311	1,085	1,003	319	7,715	3,770	118	193		4,684	
Shapes—cold formed	1	18				173			192	32		123		154	
Sashes and frames	34				8	83	174		2,369	11		1		84	
Track spikes									...					...	
Wheels & axles	79				841	104	243		2,338	19	3			28	
Fence or sign posts	3	2				2	3		35					...	
Wire—nonmetallic covered	75				20	12			135	1				20	
Wire rope	1,207	515	16,109	474	7,214	4,269	6,513	2,562	39,364	10		5	182	1,819	
Wire strand	2,154	195	20,889	2,603	8,099	7,933	16,512	11,317	69,701	17		359	21	425	
Welded wire fabric	2,587	382	486		11	424	133	1,139	5,780					71	
Nails and staples	931	159	197	21	2,445	5,680	462	13,379	23,376	2,086		2,495	23,499	50,509	
Barbed wire			385	380		131	1		897				38	1,668	
Galvanized wire fencing			39				1	23	63					41	
Bale ties & baling wire			140		112	22			274					...	
Bolts, nuts and rivets	1,325	5,226	110	13	477	6,894	16,699	649	31,760	674	10	284		16,540	
Grinding balls	17					228	916	451	1,612					4	
Blanks, nonrectangular flat rolled	11	357	713		227	538		4,407	6,252	40		31		71	
Conduit	39	2			1,110	13			1,171					65	
Pipe and tube fittings	3,783	26	54		5,179	7,205	10,571	225	27,209	82		744		9,480	
Total Other Steel Products	16,195	6,990	39,908	3,613	26,053	34,798	53,230	34,470	220,245	6,742	141	4,235	23,739	85,645	
Total Steel Products	831,491	561,524	659,760	236,288	1,269,868	1,914,835	379,445	501,470	6,446,871	577,877	213,008	141,034	308,093	1,883,780	
Iron products & ferroalloys:															
Bar iron, iron slabs & blooms etc.						1			...		3			24	
Cast iron soil pipe and fittings						85	216	173	526	89				239	
Other cast iron pipe and fittings	2		25		3	1			1,308					16	
Malleable cast iron pipe fittings	1,255				52				...					...	
Castings and forgings	2,375	292	158		2,458	3,895	17,149	1,125	29,707	2	8		357	2,047	
Pig iron					22	12			35					155	
Sponge iron	451	19	223		1	745	30		1,469	319				319	
Ferromanganese (manganese content)	3,600	2,757	3,733		143,849	12,596	2,256	841	169,632					48,044	
Ferrosilicon (silicon content)	113	30	76		5,001	1,565	1,053	504	8,343					61,182	
Ferrochromium (chromium content)	495	3,925	55	590	5,438	15,422	3,837		40,904	16,339		2	36,492	102,381	
Other ferroalloys	2,635	24	578		1,461	72	892	1,303	6,965			94		36,714	
Total Iron Products & Ferroalloys	10,926	7,047	4,849	590	158,285	34,394	25,434	3,945	258,890	16,749	11	96	36,850	251,121	
Grand Total	842,417	568,571	664,609	236,878	1,428,153	1,949,229	404,879	505,415	6,705,561	594,626	213,019	141,130	344,943	2,134,901	
Iron and steel scrap	11,430	28,368	36,398		4	43,428	1	64	119,705	24		18		41	

*Includes totals for Ireland, Denmark, Greece & Portugal.

Table 22A (continued)
Imports of Iron and Steel Products by Countries of Origin—1988
(Net tons)

53
IMPORTS
Countries of Origin

Products	Asia				Total Asia	Oceania		Total Africa
	People's Republic of China	Korea Republic	China Taiwan	Japan		Australia	Total Oceania	
Other Steel Products:								
Structural shapes, fabricated	208	71,996	3,341	41,703	124,673	104	8,346	165
Shapes—cold formed			2	18	20	...	...	...
Sashes and frames		51	44	94	283	...	...	20
Track spikes	25	11			36	...	...	...
Wheels & axles		12	120	2,361	2,505	2	2	128
Fence or sign posts	272	1	48		338	...	...	...
Wire—nonmetallic covered		543	333	189	1,618	...	...	246
Wire rope	861	57,070	2,875	16,272	83,110	41	41	150
Wire strand	2,689	32,854	441	32,353	71,481	22	22	1,697
Welded wire fabric	3,785	462	430	1,897	6,604	1	50	...
Nails and staples	33,591	128,262	12,017	16,972	241,287	3	405	69
Barbed wire	127	1,043		20	1,402	...	49	115
Galvanized wire fencing	82		84	13	179	...	275	...
Bale ties & baling wire	861		19	18	989	...	...	...
Bolts, nuts and rivets	71,310	58,151	261,155	167,713	568,488	855	856	283
Grinding balls			49	444	493	22	22	...
Blanks, nonrectangular flat rolled		924	8	1,538	3,256	...	15	...
Conduit	23	2,109	225	31	2,563	...	...	...
Pipe and tube fittings	14,753	15,516	10,101	14,244	72,254	501	506	...
Total Other Steel Products	128,587	369,004	291,293	295,661	1,181,576	1,551	10,589	2,872
Total Steel Products	160,328	1,676,189	526,484	4,566,170	7,814,876	283,526	373,186	98,135
Iron products & ferroalloys:								
Bar iron, iron slabs & blooms etc					...	...	...	...
Cast iron soil pipe and fittings	1,329	147	22		2,116	...	...	...
Other cast iron pipe and fittings	5,855	2,659	8,801	52	18,530	...	...	...
Malleable cast iron pipe fittings	3,669	1,357	1,586	13	18,935	...	...	...
Castings and forgings	20,902	6,569	12,568	3,738	114,729	456	630	186
Pig iron		55	8		47,601	9,987	9,987	...
Sponge iron				8,534	8,534	...	...	19
Ferromanganese (manganese content)	4,778			3,713	8,491	14,897	14,897	198,669
Ferrosilicon (silicon content)	220			311	617	...	...	6,182
Ferrochromium (chromium content)	16,398		1,975	3,774	40,272	...	...	266,109
Other ferroalloys	1,796			2,692	4,588	33,563	46,423	107,733
Total Iron Products & Ferroalloys	54,947	10,787	24,960	22,827	264,413	58,902	71,936	578,898
Grand Total	215,275	1,686,976	551,444	4,608,997	8,079,289	342,428	445,122	677,033
Iron and steel scrap	19	...	22	15,924	18,468	1,374	2,172	...

Table 23
Imports of Iron and Steel Products by Customs District—1988
(Net tons)

Products	ATLANTIC COAST												Total
	Grand Total	Boston	Providence	New York City	Philä.	Baltimore/ Wash., DC	Norfolk	Wil- mington	Charles- ton	Savannah	Tampa	Miami	
Steel Mill Products													
Ingot, blooms, billets, slabs, etc.	2,844,979	1,518	—	323,835	104,485	20,005	32,236	162	3,819	10,153	—	—	496,213
Wire rods	1,493,833	23,456	7,145	16,342	53,353	33,453	2,440	1,063	10,293	57,342	103,311	2,935	311,133
Structural shapes—plain 3" & over	1,847,287	206,061	5,119	4,754	42,874	44,694	1,312	70,739	6,564	98,134	39,044	7,546	526,841
Steel piling	112,067	8,552	13,662	855	1,028	2,431	—	362	—	8,990	593	841	37,314
Plates cut length	1,175,461	86,280	2,510	9,429	38,741	11,132	4,485	11,855	5,698	50,319	25,430	4,818	250,697
Plates in coils	557,744	4,270	28	956	42,407	191	1,503	11,255	1,711	7,144	11,533	11	81,009
Rails standard	163,312	—	300	25	1,968	18,771	2,876	—	—	697	36	48	24,721
Rails other	96,694	100	—	2	3,567	711	—	—	10	1,446	—	—	5,836
Rail accessories	8,487	18	—	—	6	8	—	—	—	27	—	—	59
Bars—Hot rolled	679,527	10,563	363	6,543	21,458	12,415	819	4,753	1,567	6,953	4,669	1,011	71,114
Bars shapes under 3 inches	125,687	9,151	137	1,038	6,857	2,314	22	412	550	810	2,490	461	24,242
Concrete reinforcing bars	357,253	4,565	—	766	15,508	—	—	1,841	3,961	—	2,568	68,147	97,356
Bars—Cold finished	235,776	6,644	788	8,286	11,047	10,196	2,578	3,240	1,962	1,996	504	1,046	48,287
Tool steel	44,095	3,390	542	4,103	2,888	6,993	2,508	77	2,250	48	43	6	22,848
Standard pipe	964,039	28,800	5,970	9,356	99,287	4,878	3,297	19,673	12,183	28,094	50,320	5,776	267,634
Oil country goods	988,194	8,407	40	611	34,796	2,755	154	2,591	919	2,846	5,536	78	58,733
Line pipe	552,015	1,253	—	2,691	17,979	301	38	476	150	3,814	50,281	432	77,415
Mechanical tubing	381,682	11,834	106	3,001	33,133	10,655	708	1,750	10,128	6,877	8,948	321	87,461
Pressure tubing	50,908	2,309	—	686	7,345	338	33	—	1,126	3,854	65	305	16,061
Stainless pipe & tubing	38,532	275	—	5,200	5,552	100	18	21	482	376	883	—	12,907
Pipe & tubing nonclassified	28,429	20	—	23	1,800	946	—	2	8	—	—	78	2,877
Structural pipe & tubing	278,870	2,519	—	151	5,573	383	99	187	339	859	1,601	1,264	12,975
Wire drawn	552,780	3,532	3	33,086	8,410	20,295	9,313	5,625	26,418	4,051	5,116	7,168	123,017
Black plate	154,229	18,093	1,036	12,118	19,257	880	1,644	549	—	12,083	759	—	66,419
Tin plate	294,552	12,531	876	1,380	13,608	2,881	160	1,707	164	3,393	2,008	—	38,708
Tin free steel	97,460	341	—	—	3,760	1,361	—	2,180	16	23	—	—	7,681
Sheets—Hot rolled	2,206,599	85,656	17,618	5,259	157,468	9,613	8,132	44,071	8,012	13,632	31,562	4,815	385,838
—Cold rolled	2,105,755	129,213	40,195	65,938	203,871	17,781	31,376	35,103	12,788	28,169	9,104	4,877	578,415
Sheets galvanized-hot dipped	1,657,441	46,950	10,782	31,658	183,629	4,746	49,410	26,247	13,564	54,200	77,590	16,044	514,820
—electrolytic	291,370	1,542	—	1,046	16,057	2,246	39,532	1,720	2,737	4,193	9,412	2,834	81,319
All other metallic coated	248,111	4,432	419	1,152	25,628	1,560	8,079	471	2,902	6,285	2,988	4,886	58,802
Electrical sheets & strip	73,960	8,423	—	8	3,080	2,306	—	451	658	8,758	—	—	23,684
Strip—Hot rolled	49,553	5,921	34	460	962	29	847	177	3	3,077	2,257	—	13,767
—Cold rolled	134,211	10,416	3,111	14,968	5,106	1,461	778	358	6,215	2,034	2,506	1,487	48,440
Total Steel Mill Products	20,890,893	747,037	110,783	565,726	1,192,486	248,827	204,397	249,120	137,195	430,677	451,159	137,235	4,474,643
Carbon	19,455,518	709,695	105,387	493,459	1,104,458	164,434	191,824	246,481	112,057	395,564	442,715	137,146	4,103,220
Alloy	1,119,418	31,257	1,916	41,559	45,265	50,970	9,653	2,351	19,522	25,840	7,423	11	235,767
Stainless	315,958	6,085	3,480	30,708	42,763	33,423	2,919	288	5,616	9,273	1,021	77	135,653

Table 23 (continued)*Imports of Iron and Steel Products by Customs District—1988*

(Net tons)

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IMPORTS
Customs District

Products	GULF COAST-MEXICAN BORDER							Total
	Mobile	New Orleans	Port Arthur	Houston	Dallas	Laredo	El Paso Nogales	
Steel Mill Products								
Ingot, blooms, billets, slabs, etc.	406,632	277,113	270,907	48,610	—	61,617	22	1,064,901
Wire rods	33,090	171,169	—	131,062	5,416	10,429	1	351,167
Structural shapes—plain 3" & over	50,562	167,687	—	220,592	113	14,173	—	453,127
Steel piling	3,030	5,980	—	13,856	—	—	—	22,866
Plates cut length	18,377	126,158	214	196,387	25	20,307	—	361,468
Plates in coils	5,681	16,046	85	104,114	—	512	—	126,456
Rails standard	12,164	2,938	—	10,170	—	—	—	25,272
Rails other	22,119	11,146	—	1,761	—	—	3	35,029
Rail accessories	2,822	113	—	52	—	—	1	2,988
Bars—Hot rolled	1,307	37,045	—	34,181	282	7,881	135	80,831
Bars shapes under 3 inches	239	4,429	—	7,029	1	1,804	—	13,502
Concrete reinforcing bars	1	3,740	—	1,388	2	3,833	—	8,964
Bars—Cold finished	730	14,328	—	20,914	58	3,853	7	39,890
Tool steel	103	212	—	70	—	341	4	730
Standard pipe	135	66,260	—	140,882	—	60,027	—	267,304
Oil country goods	124	41,215	—	636,759	3	927	45	679,073
Line pipe	4,305	94,200	—	210,055	—	25,216	43	333,819
Mechanical tubing	1,805	53,439	—	81,937	10	2,915	19	140,125
Pressure tubing	1,984	5,000	—	13,958	33	1,474	—	22,449
Stainless pipe & tubing	261	917	—	9,862	97	882	15	12,034
Pipe & tubing nonclassified	—	216	—	6,018	—	38	—	8,272
Structural pipe & tubing	646	6,313	—	31,145	—	186	—	38,290
Wire drawn	550	39,975	—	21,962	68	2,141	500	65,196
Black plate	36	13,555	—	2,581	—	—	—	16,172
Tin plate	6,532	21,536	—	25,998	799	—	—	54,865
Tin free steel	1,467	2,866	—	10,939	803	—	—	16,075
Sheets—Hot rolled	18,796	169,456	711	253,129	233	6,940	—	449,265
—Cold rolled	11,961	220,705	241	132,581	142	19,618	45	385,268
Sheets galvanized-hot dipped	1,664	209,551	—	185,712	—	112,436	4,148	513,511
—electrolyte	172	19,176	—	11,165	—	7	—	30,520
All other metallic coated	664	59,439	—	10,683	—	—	26	70,812
Electrical sheets & strip	—	18,726	—	1,581	—	—	—	20,307
Strip—Hot rolled	2	2,196	—	2,423	—	1,779	—	6,400
—Cold rolled	96	9,215	—	4,684	—	2,817	54	16,866
Total Steel Mill Products	608,057	1,892,080	272,130	2,586,242	8,085	362,153	5,068	5,733,812
Carbon	602,391	1,713,924	268,322	2,400,793	7,807	334,912	4,853	5,333,002
Alloy	5,195	168,900	3,808	161,960	163	17,665	192	357,883
Stainless	471	9,256	—	23,489	115	9,576	22	42,929

Table 23 (continued)
Imports of Iron and Steel Products by Customs District—1988

Products	PACIFIC COAST						OFF SHORE				
	San Diego	Los Angeles	San Francisco	Columbia-Snake	Seattle	Total	Virgin Islands	Anchorage	Honolulu	San Juan	Total
Steel Mill Products											
Ingots, blooms, billets, slabs, etc.	30	789,635	36	21,901	22,317	833,919	1	—	—	—	1
Wire rods	736	178,866	55,414	39	33,796	268,851	898	—	—	16,055	16,953
Structural shapes-plain 3" & over	7,215	262,338	109,982	58,523	11,447	449,505	—	—	397	17,564	17,961
Steel piling	—	1,960	4,020	2,292	2,594	10,866	—	316	—	228	544
Plates cut length	1	69,293	15,732	21,515	22,569	129,110	454	—	1,539	11,105	13,098
Plates in coils	—	44,998	3,981	30,051	6,888	85,918	—	—	—	—	—
Rails standard	—	146	209	19,451	44	19,850	—	—	—	—	—
Rails other	—	1,159	450	11,152	209	12,970	77	—	—	—	77
Rail accessories	—	9	5	4,429	1	4,444	—	—	—	—	—
Bars—Hot rolled	3,912	28,777	1,272	1,982	3,453	39,396	2,243	—	61	16,378	18,682
Bars shapes under 3 inches	27	28,415	3,558	1,622	2,553	36,175	1	24	—	6,632	6,657
Concrete reinforcing bars	—	79,585	33,787	899	972	115,243	6,789	—	1,096	123,234	131,119
Bars—Cold finished	28	24,162	2,371	6,913	2,455	35,929	—	—	—	1,361	1,361
Tool steel	1	1,461	68	781	343	2,654	—	—	—	—	—
Standard pipe	186	236,361	64,648	31,848	35,410	368,453	—	2	1,897	11,479	13,378
Oil country goods	42	52,109	3,926	3,478	5,221	64,776	—	39,774	81	958	40,813
Line pipe	458	82,316	4,980	3,055	3,047	93,856	—	12,914	—	2,910	15,824
Mechanical tubing	93	27,131	6,367	11,416	7,944	52,951	—	1,188	106	10,471	11,765
Pressure tubing	—	5,360	3	—	16	5,379	—	—	—	3,200	3,200
Stainless pipe & tubing	1	3,120	47	950	1,521	5,639	—	42	—	—	42
Pipe & tubing nonclassified	—	275	—	220	10	505	—	4,198	—	1,701	5,899
Structural pipe & tubing	—	30,103	14,146	11,957	7,587	63,793	—	641	363	1,754	2,758
Wire drawn	88	28,853	5,200	2,419	43,971	90,531	—	—	1,981	15,844	17,825
Black plate	—	19,920	6,313	111	—	26,344	—	—	—	44	44
Tin plate	—	20,505	74,904	—	—	95,409	—	—	—	16,999	16,999
Tin free steel	—	28,957	19,963	—	—	48,920	—	—	—	10,935	10,935
Sheets—Hot rolled	2	254,950	68,216	35,766	11,084	370,018	8	3	—	4,782	4,793
—Cold rolled	155	305,125	124,393	10,499	12,798	452,970	9	—	—	5,501	5,510
Sheets galvanized-hot dipped	19	111,546	105,721	25,571	28,002	270,859	6	—	810	14,484	15,300
—electrolyte	—	43,576	1,579	6,929	1,100	53,184	—	—	1,560	5,165	6,725
All other metallic coated	—	34,147	17,924	1,777	12,907	66,755	700	—	1,809	5,239	7,748
Electrical sheets & strip	—	5,189	4,114	—	—	9,303	—	—	—	—	—
Strip—Hot rolled	—	5,003	350	827	395	6,575	—	—	3	—	3
—Cold rolled	409	5,580	2,659	2,462	612	11,722	—	—	556	3,833	4,389
Total Steel Mill Products	13,401	2,810,929	756,339	330,835	281,266	4,192,772	11,186	59,104	12,258	307,858	390,403
Carbon	13,174	2,726,920	743,445	318,041	264,656	4,066,236	4,736	58,666	12,258	304,582	380,242
Alloy	59	49,931	9,144	11,020	11,614	81,768	6,450	395	—	1,570	8,415
Stainless	169	34,078	3,751	1,774	4,996	44,768	—	42	—	1,706	1,748

Table 23 (continued)
Imports of Iron and Steel Products by Customs District—1988
 (Net Tons)

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IMPORTS
 Customs District

	GREAT LAKES-CANADIAN BORDER													
Products	Port-land	St. Albans	Ogdens-burg	Buffalo	Great Falls	Pem-bina	Duluth Mineapls	Mil-waukee	Detroit	Chicago	Cleveland	St. Louis	Total	
Steel Mill Products														
Ingot, blooms, billets, slabs, etc.	—	23,599	429	39,787	—	134	7,405	—	92,140	128,404	158,047	—	449,945	
Wire rods	19	6,177	64,541	143,797	79	—	1	—	213,380	37,529	74,389	5,817	545,729	
Structural shapes—plain 3" & over	267	22,984	13,431	90,043	273	47,800	269	19,820	109,143	70,967	24,706	128	399,851	
Steel piling	187	2,504	9,486	834	—	—	—	—	7,758	18,011	1,697	—	40,477	
Plates cut length	114	9,179	6,641	66,589	1,727	7,133	2,420	7,282	183,305	101,034	35,460	205	421,089	
Plates in coils	—	22	72	4,663	1,742	65,321	20,639	—	87,518	47,056	37,028	299	264,360	
Rails standard	728	568	1,718	48,717	—	585	5,372	—	28,778	5,393	1,610	—	93,469	
Rails other	60	30	6,230	12,753	—	8,372	6,325	—	5,338	166	3,507	—	42,781	
Rail accessories	—	—	418	300	—	6	32	—	80	129	32	—	997	
Bars—Hot rolled	15	9,962	7,697	84,658	1,523	4,909	—	219	270,163	42,822	44,220	3,315	469,503	
Bars shapes under 3 inches	16	1,425	498	25,628	21	—	—	295	14,140	1,421	1,666	—	45,110	
Concrete reinforcing bars	149	2,451	561	1,363	—	—	—	—	44	3	—	—	4,571	
Bars—Cold finished	19	1,943	2,556	32,794	30	—	374	31	34,950	32,193	5,419	—	110,309	
Tool steel	1	829	27	1,949	—	4	40	777	9,512	4,379	342	2	17,862	
Standard pipe	8	9,033	10,729	2,536	107	441	388	—	6,957	9,952	7,119	—	47,270	
Oil country goods	151	269	189	41,389	7,264	242	51	—	90,317	2,245	2,045	638	144,800	
Line pipe	175	142	180	12,377	3,905	6,078	107	—	7,597	451	89	—	31,101	
Mechanical tubing	209	3,048	7,547	22,439	2,560	350	16	246	42,283	6,149	4,157	377	89,381	
Pressure tubing	—	89	88	155	45	—	—	21	142	3,082	197	—	3,819	
Stainless pipe & tubing	—	691	1,628	1,440	24	—	9	98	3,333	672	4	12	7,911	
Pipe & tubing nonclassified	1	56	23	90	43	—	2	—	9,408	792	461	—	10,876	
Structural pipe & tubing	46	7,669	11,871	43,788	692	718	—	—	95,052	22	—	1,194	181,052	
Wire drawn	8,381	27,580	43,328	64,502	4	43	184	1,854	62,749	52,435	2,481	2,669	266,210	
Black plate	—	—	—	4,102	—	—	1,167	—	12,758	11,370	15,852	—	45,249	
Tin plate	169	—	21	40,667	—	—	—	—	23,528	17,850	6,335	—	88,570	
Tin free steel	—	—	20	3,900	—	—	—	—	2,257	5,903	1,766	—	13,846	
Sheets—Hot rolled	1,391	6,575	6,255	88,003	2,630	35,805	35,100	6,578	407,323	241,886	160,481	4,659	996,686	
—Cold rolled	891	17,033	8,499	52,799	—	298	11,751	5,253	185,825	341,501	56,377	3,368	683,595	
Sheets galvanized-hot dipped	190	54	1,139	48,537	3	—	233	—	219,555	47,904	23,487	1,846	342,948	
—electrolyte	2	63	32	1,513	—	—	—	—	99,400	13,824	4,730	59	119,623	
All other metallic coated	4	24	2,975	254	1	98	292	—	24,295	6,785	9,261	10	43,999	
Electrical sheets & strip	—	—	56	2,355	—	—	—	—	7,425	8,187	2,641	—	20,664	
Strip—Hot rolled	—	304	603	5,541	—	—	—	—	15,731	628	—	—	22,807	
—Cold rolled	—	169	2,038	21,433	—	—	—	52	18,526	6,752	3,242	581	52,793	
Total Steel Mill Products	13,196	154,471	211,528	1,011,697	22,675	178,336	84,792	49,932	2,390,712	1,267,895	668,849	25,179	6,099,253	
Carbon	13,189	152,820	205,211	926,280	22,238	170,789	83,370	33,168	2,174,028	1,154,093	612,594	25,038	5,572,818	
Alloy	7	851	1,340	47,359	378	7,522	1,356	16,524	204,607	84,509	71,102	30	435,585	
Stainless	—	800	4,977	38,058	58	25	67	239	12,077	29,292	5,152	111	90,856	

Table 23A
Imports of Iron and Steel Products by Customs District—1988
(Net tons)

Products	ATLANTIC COAST												Total
	Grand Total	Boston	Providence	New York City	Phila.	Baltimore/ Wash., DC	Norfolk	Wil- mington	Charles- ton	Savannah	Tampa	Miami	
Other Steel Products													
Structural shapes, fabricated	238,267	6,665	5,254	3,664	672	581	277	7,639	192	5,474	7,988	1,323	39,729
Shapes—Cold formed	1,302	146	—	32	448	—	—	—	27	—	—	10	663
Sashes and frames	6,104	39	—	227	2	47	63	82	1,702	345	40	17	2,564
Track spikes	205	—	—	—	11	—	—	—	—	—	—	—	11
Wheels and axles	50,734	576	—	2,000	894	1,720	462	—	5	437	1	162	6,257
Fence or sign posts	864	4	—	160	—	55	—	—	—	—	—	—	219
Wire—Nonmetallic covered	6,943	12	—	775	45	129	—	—	67	86	—	2	1,116
Wire rope	137,112	3,929	—	13,339	919	8,561	3,887	548	10,477	4,839	2,815	993	50,307
Wire strand	173,112	1,065	—	25,987	3,579	5,197	7,240	6,544	14,556	14,496	3,266	4,739	86,669
Welded wire fabric	51,594	126	—	4,995	192	1,603	174	1	555	174	494	15,330	23,644
Nails and staples	406,837	12,533	2,343	31,234	35,158	13,760	4,599	15,634	8,904	15,084	14,248	8,883	162,360
Barbed Wire	15,538	67	—	229	259	498	276	453	273	464	295	467	3,281
Galvanized wire fencing	11,879	—	16	77	1	46	46	—	58	360	—	483	1,087
Bale ties and baling wire	1,866	—	—	512	55	55	—	—	20	—	65	132	839
Bolts, nuts and rivets	710,370	12,953	5,253	76,757	24,863	41,413	6,369	4,800	4,706	23,906	5,936	5,323	212,279
Grinding balls	5,874	—	—	37	285	236	—	—	—	—	40	—	598
Blanks, nonrectangular flat rolled	139,732	387	50	84	3,338	106	849	—	—	6	1,137	7	5,964
Conduit	7,261	—	—	184	438	82	82	—	22	—	50	—	858
Pipe and tube fittings	132,215	1,566	—	10,717	2,497	2,556	1,830	267	876	5,120	5,002	309	30,740
Total Other Steel Products	2,097,811	40,071	12,915	171,011	73,657	76,646	26,153	35,969	42,441	70,792	41,379	38,182	629,205
Total Steel Products	22,988,704	787,108	123,698	736,737	1,266,143	325,473	230,550	285,089	179,636	501,469	492,538	175,417	5,103,848
Iron Products & Ferroalloys													
Bar iron, iron slabs & blooms, etc	10	—	—	—	—	—	—	—	—	—	—	—	—
Cast iron soil and pipe and fittings	6,730	6	—	1,269	—	30	—	—	—	90	32	—	1,427
Other cast iron pipe and fittings	21,465	444	—	1,279	734	991	412	—	38	1,510	100	17	5,525
Malleable cast iron pipe fittings	24,067	100	—	3,767	53	1,468	—	—	2,170	240	1,203	231	9,232
Castings and forgings	198,082	8,361	78	35,505	7,103	12,835	12,853	4,312	1,984	10,339	1,335	2,252	96,957
Pig iron	700,059	3,395	—	234	4,582	—	20,144	—	—	1,249	—	—	29,604
Sponge iron	194,367	157	—	703	59,040	23	—	—	12	—	—	—	59,935
Ferromanganese (manganese content)	535,240	—	—	300	11,121	55,232	—	—	—	—	1,499	—	68,152
Ferrosilicon (silicon content)	231,179	—	—	144	5,551	13,494	322	73	51	1,806	505	—	21,946
Ferrochromium (chromium content)	465,560	—	—	666	5,192	139,475	—	—	—	59	—	—	145,392
Other Ferroalloys	293,790	—	—	961	24,543	47,869	—	—	—	1,400	12,219	—	86,992
Total Iron Products & Ferroalloys	2,670,548	12,463	78	44,830	117,917	271,415	33,731	4,386	4,255	16,692	16,893	2,500	525,162
Grand Total	25,659,253	799,571	123,776	781,567	1,384,060	596,888	264,281	289,475	183,891	518,161	509,431	177,917	5,629,010
Iron and steel scrap	1,037,822	1	—	42,470	2,182	36,465	—	—	22	—	213	388	81,741

Table 23A (continued)
Imports of Iron and Steel Products by Customs District—1988
(Net tons)

Products	GULF COAST-MEXICAN BORDER							Total
	Mobile	New Orleans	Port Arthur	Houston	Dallas	Laredo	El Paso Nogales	
Other Steel Products								
Structural shapes, fabricated	925	5,497	8	14,673	16	2,801	136	24,056
Shapes—Cold formed	—	1	—	—	—	88	—	89
Sashes and frames	—	2	—	2	2	23	2	31
Track spikes	—	—	—	—	—	—	—	—
Wheels and Axles	289	137	—	91	37	—	174	728
Fence or sign posts	—	22	—	2	3	197	—	224
Wire—Nonmetallic covered	1	117	—	58	1	4,472	—	4,649
Wire rope	2,397	20,135	—	23,691	339	869	12	47,443
Wire strand	1,303	10,396	—	32,101	2,391	222	—	46,413
Welded wire fabric	62	19	—	1,188	88	5,679	16	7,052
Nails and staples	207	25,542	—	28,546	42	2,176	76	56,589
Barbed wire	183	5,307	—	2,501	—	2,004	234	10,229
Galvanized wire fencing	—	19	—	61	1	6,943	247	7,271
Bale ties and baling wire	85	95	—	—	—	—	—	180
Bolts, nuts and rivets	6,230	14,950	—	33,062	2,754	7,051	353	54,400
Grinding balls	10	—	—	22	—	35	—	67
Blanks, nonrectangular flat rolled	1,369	66,662	—	14,892	—	—	—	82,923
Conduit	3,459	6	—	363	7	—	—	3,835
Pipe and tube fittings	2,145	7,983	—	44,667	234	5,334	45	60,408
Total Other Steel Products	18,664	156,890	8	195,919	5,912	37,895	1,295	416,587
Total Steel Products	626,721	192,048,971	272,138	2,782,161	13,997	400,048	6,363	6,150,399
Iron Products & Ferroalloys								
Bar iron, iron slabs & blooms, etc.	—	—	—	—	—	—	—	—
Cast iron soil pipe and fittings	76	251	—	1	—	20	—	348
Other cast iron pipe and fittings	15	37	—	1,876	—	863	—	2,791
Malleable cast iron pipe fittings	—	300	—	1,572	472	1,838	—	4,182
Castings and forgings	398	6,562	—	23,760	726	4,922	2,838	39,206
Pig iron	—	554,054	—	3,351	—	—	—	557,405
Sponge iron	—	133	—	91	22	—	—	246
Ferromanganese (manganese content)	17,513	335,798	—	360	—	—	—	353,671
Ferrosilicon (silicon content)	4,141	150,266	—	2,538	—	—	—	156,945
Ferrochromium (chromium content)	2,565	312,380	—	352	—	651	—	315,948
Other Ferroalloys	17,896	145,537	—	4,281	—	1,688	—	169,402
Total Iron Products & Ferroalloys	42,803	1,505,318	—	38,180	1,220	9,982	2,838	1,600,144
Grand Total	669,324	193,554,289	272,138	2,820,341	15,217	410,030	9,201	7,750,543
Iron and steel scrap	41	75,917	—	6,213	—	37,134	11,628	130,933

Table 23A (continued)
Imports of Iron and Steel Products by Customs District—1988
(Net Tons)

Products	PACIFIC COAST						OFF SHORE				
	San Diego	Los Angeles	San Francisco	Columbia-Snake	Seattle	Total	Virgin Islands	Anchorage	Honolulu	San Juan	Total
Other Steel Products											
Structural shapes, fabricated	8,446	30,042	10,669	13,261	26,585	89,003	3	1,269	572	1,486	3,330
Shapes—Cold formed	—	37	1	—	123	161	—	—	—	—	—
Sashes and frames	1	84	56	—	1,044	1,185	—	—	1	24	25
Track spikes	—	—	—	25	7	32	—	2	—	—	2
Wheels and axles	22	151	16	878	99	1,166	—	—	—	8	8
Fence or sign posts	—	69	2	5	—	76	—	—	—	259	259
Wire—Nonmetallic covered	166	221	23	6	381	797	—	—	—	4	4
Wire rope	527	5,268	3,099	5,865	11,481	25,240	—	20	377	88	485
Wire strand	87	7,063	3,129	3,128	12,364	25,771	—	23	20	2,407	2,450
Welded wire fabric	2,166	1,308	360	55	4,412	8,301	126	—	37	3,018	3,181
Nails and staples	511	52,583	28,134	2,203	34,488	117,919	1	2	398	5,156	5,557
Barbed wire	—	301	401	99	63	864	—	—	49	1,071	1,120
Galvanized wire fencing	—	21	2	17	541	581	—	—	96	188	284
Bale ties and baling wire	—	264	18	—	106	388	—	—	—	26	26
Bolts, nuts and rivets	1,120	143,398	11,389	13,655	40,952	210,514	—	5	249	720	974
Grinding balls	—	385	—	—	46	431	—	97	—	252	349
Blanks, nonrectangular flat rolled	47	2,824	5,647	4	35	8,557	—	—	—	809	809
Conduit	—	1,591	2	—	24	1,617	—	—	—	192	192
Pipe and tube fittings	609	12,416	1,776	3,179	1,972	19,952	—	35	9	97	141
Total Other Steel Products	13,702	258,025	64,725	42,381	134,723	513,555	130	1,452	1,809	15,803	19,196
Total Steel Products	27,103	3,068,954	821,064	373,216	415,989	4,688,407	11,316	60,556	14,067	323,661	409,599
Iron Products & Ferroalloys											
Bar iron, iron slabs & blooms, etc.	—	10	—	—	—	10	—	—	—	—	—
Cast iron soil pipe and fittings	5	881	—	57	41	984	—	—	—	—	—
Other cast iron pipe and fittings	994	10,088	724	91	32	11,929	—	—	—	5	5
Malleable cast iron pipe fittings	—	6,774	253	116	190	7,333	—	—	—	127	127
Castings and forgings	4,511	7,604	8,575	522	8,885	30,097	—	—	2	547	549
Pig iron	—	—	21,772	—	3,384	25,156	—	—	—	—	—
Sponge iron	—	399	6	—	64	469	—	—	—	—	—
Ferromanganese (manganese content)	—	—	—	4,391	551	4,942	—	—	—	—	—
Ferrosilicon (silicon content)	—	477	381	472	309	1,639	—	—	—	—	—
Ferrochromium (chromium content)	—	1,836	—	59	220	2,115	—	—	—	—	—
Other Ferroalloys	13,246	3,691	10,643	5,424	2,284	35,288	—	3	—	—	3
Total Iron Products & Ferroalloys	18,755	31,759	42,353	11,130	15,960	119,962	—	3	2	679	854
Grand Total	45,858	3,100,713	863,417	384,346	431,949	4,808,369	11,316	60,559	14,069	324,340	410,283
Iron and steel scrap	2,261	1,845	—	—	203,047	207,153	—	—	489	664	1,153

Table 23A (continued)
Imports of Iron and Steel Products by Customs District—1988
(Net Tons)

Products	GREAT LAKES-CANADIAN BORDER												Total
	Port-land	St. Albans	Ogdens-burg	Buffalo	Great Falls	Pem-bina	Duluth Mineapolis	Mil-waukee	Detroit	Chicago	Cleveland	St. Louis	
Other Steel Products													
Structural shapes, fabricated	23,060	5,296	6,844	28,055	1,962	630	85	83	15,401	516	50	172	82,154
Shapes—Cold formed	—	29	17	323	—	—	—	—	19	—	1	—	389
Sashes and frames	16	218	57	1,063	506	60	33	1	328	14	1	3	2,300
Track spikes	53	—	36	64	—	3	—	—	4	—	—	—	160
Wheels and axles	306	232	1,017	358	1	14,606	13,074	11	11,565	652	749	—	42,572
Fence or sign posts	3	—	20	4	—	2	5	—	3	48	—	—	85
Wire—Nonmetallic covered	—	—	14	67	—	—	3	—	206	50	11	26	377
Wire rope	589	242	1,602	886	87	50	173	6	1,605	4,513	189	2,697	12,639
Wire strand	1	14	611	415	4	45	882	—	755	7,532	952	598	11,809
Welded wire fabric	—	4,359	350	2,955	43	—	162	14	1,101	149	261	22	9,416
Nails and staples	2,302	8,933	10,030	9,284	7	21	167	179	16,098	16,823	470	80	64,394
Barbed wire	—	—	38	6	—	—	—	—	—	—	—	—	44
Galvanized wire fencing	—	38	1,539	529	53	—	128	23	336	11	—	—	2,657
Bale ties and baling wire	50	63	234	—	—	—	—	—	84	—	—	—	431
Bolts, nuts and rivets	1,221	1,805	25,243	17,187	617	212	2,675	1,444	54,658	95,287	17,986	3,868	222,203
Grinding balls	—	—	164	2,722	23	—	1,005	—	425	72	16	—	4,427
Blanks, nonrectangular flat rolled	86	2	30	162	—	—	—	—	39,435	1,316	38	410	41,479
Conduit	—	—	24	125	—	—	1	2	64	519	21	—	756
Pipe and tube fittings	110	217	1,538	1,261	366	96	152	—	2,004	14,674	441	106	20,972
Total Other Steel Products	27,797	21,448	49,407	65,467	3,669	15,724	18,545	1,769	144,092	142,175	21,188	7,981	519,264
Total Steel Products	40,993	175,919	260,935	1,077,164	26,344	194,060	103,337	51,701	2,534,804	1,410,070	710,037	33,160	6,618,517
Iron Products & Ferroalloys													
Bar iron, iron slabs & blooms, etc	—	—	—	—	—	—	—	—	—	—	—	—	—
Cast iron soil pipe and fittings	—	237	364	2,789	—	—	—	—	116	465	—	—	3,971
Other cast iron pipe and fittings	—	—	6	34	—	—	32	—	28	630	486	—	1,216
Malleable cast iron pipe fittings	—	—	9	662	18	—	—	—	1,130	761	234	378	3,192
Castings and forgings	39	3,257	4,043	5,295	2,148	4	227	20	7,229	8,055	679	278	31,274
Pig iron	—	871	2,834	213	—	—	—	40,647	12,247	7,832	23,251	—	87,895
Sponge iron	316	1,779	23,454	9,022	1	26	37	—	14,841	84,115	124	—	133,715
Ferromanganese (manganese content)	—	—	4,740	2,684	—	—	—	—	19,663	32,347	49,041	—	108,475
Ferrosilicon (silicon content)	—	—	1,545	14,526	—	—	—	1,074	8,334	3,544	21,624	—	50,847
Ferrochromium (chromium content)	—	—	1,512	31	—	—	—	—	—	392	172	—	2,107
Other Ferroalloys	—	—	789	671	—	—	—	17	451	138	41	—	2,107
Total Iron Products & Ferroalloys	354	6,145	39,295	35,927	2,167	31	297	41,758	64,039	138,280	95,653	656	424,599
Grand Total	41,347	182,064	300,230	1,113,091	28,511	194,091	103,634	93,459	2,598,843	1,548,350	805,690	33,816	7,043,116
Iron and steel scrap	22	505	22,466	92,442	206	2,709	564	—	439,630	50,643	7,655	—	616,842



RAW STEEL PRODUCTION

Raw steel is defined as steel in the first solid state after melting suitable for further processing or sale, including ingots, steel for foundry castings and strand or pressure cast blooms, billets, slabs, or other product forms.

Raw steel production capability is defined as the tonnage capability to produce raw steel for a sustained full order book.

RAW STEEL

By Furnace
and Grade

Table 24
Raw Steel Production by Type of Furnace, Grade and Cast

(Thousands of net tons)

Year	Open Hearth			Basic Oxygen Process			Electric			
	Carbon	Alloy	Total	Carbon	Alloy	Total	Carbon	Alloy	Stainless	Total
1988	4,915	203	5,118	52,918	5,042	57,960	28,989	5,657	2,199	36,846
1987	2,652	14	2,666	48,536	3,960	52,496	26,788	5,173	2,028	33,989
1986	3,170	160	3,330	44,366	3,520	47,885	23,877	4,825	1,689	30,390
1985	6,005	423	6,428	47,688	4,197	51,885	23,006	5,257	1,683	29,946
1984	7,928	408	8,336	48,399	4,423	52,822	23,591	6,006	1,772	31,369
1983	5,703	248	5,951	48,115	3,934	52,050	19,965	4,900	1,750	26,615
1982	5,642	468	6,110	41,214	4,095	45,309	17,287	4,635	1,235	23,158
1981	12,195	1,257	13,452	65,701	7,530	73,231	23,566	8,836	1,743	34,145
1980	11,844	1,210	13,054	60,532	7,083	67,615	22,313	7,152	1,701	31,166
1979	17,200	1,958	19,158	75,334	7,922	83,256	23,692	8,128	2,107	33,927

Table 24 (continued)
 Raw Steel Production by Type of Furnace, Grade and Cast
 (Thousands of net tons)

	Total All Grades				Per Cent of Total						Production by Type of Cast		
					By Grade			By Type of Furnace			(Thousands of net tons)		
	Carbon	Alloy	Stainless	Total	Carbon	Alloy	Stain- less	OH	BOP	Elec- tric	Ingots	Cont. Cast	Steel Cast
1988	86,823	10,902	2,199	99,924	86.9	10.9	2.2	5.1	58.0	36.9	38,615	61,232	77
1987	77,976	9,147	2,028	89,151	87.5	10.2	2.3	3.0	58.9	38.1	35,802	53,284	65
1986	71,413	8,505	1,689	81,606	87.5	10.4	2.1	4.1	58.7	37.2	36,487	45,064	55
1985	76,699	9,877	1,683	88,259	86.9	11.2	1.9	7.3	58.8	33.9	49,035	39,161	63
1984	79,918	10,838	1,772	92,528	86.4	11.7	1.9	9.0	57.1	33.9	55,787	36,669	74
1983	73,783	9,082	1,750	84,615	87.2	10.7	2.1	7.0	61.5	31.5	57,385	27,174	56
1982	64,143	9,198	1,235	74,577	86.0	12.3	1.7	8.2	60.7	31.1	52,875	21,628	74
1981	101,462	17,623	1,743	120,828	84.0	14.6	1.4	11.1	60.6	28.3	94,516	26,138	173
1980	94,689	15,445	1,701	111,835	84.7	13.8	1.5	11.7	60.4	27.9	88,937	22,720	178
1979	116,226	18,008	2,107	136,341	85.3	13.2	1.5	14.0	61.1	24.9	113,084	23,043	215

Table 25
Raw Steel Production by States
(Thousands of net tons)

States	1988	1987	1986	1985	1984
Pennsylvania	13,673	11,609	9,492	12,034	14,372
R.I., Conn., N.J., N.Y., Del., Md.	6,344	5,127	5,130	5,066	5,649
Va., W. Va., Ga., Fla., N.C., S.C., La.	7,617	7,056	6,641	6,301	6,320
Ala., Tenn., Ky., Miss., Ark.	6,216	5,506	5,333	6,031	4,914
Ohio	17,662	16,267	14,522	14,094	15,438
Indiana	21,175	19,290	16,837	19,687	19,793
Illinois	7,758	7,141	6,414	6,479	6,504
Michigan	8,194	7,699	7,475	7,297	7,754
Texas	2,367	3,668	3,739	4,656	4,790
Minn., Mo., Okla., Nebr., Iowa	3,967	2,695	2,445	2,104	2,416
Ariz., Col., Utah, Wash., Ore., Ca., Hawaii	4,950	3,093	3,580	4,510	4,578
Total	99,924	89,151	81,606	88,259	92,528

Table 26
Monthly and Quarterly Raw Steel Production and Capability Utilization

(Thousands of net tons)†

Periods	1988		1987		1986		1985		1984	
	Net Tons	Capability Utilization*	Net Tons	Capability Utilization*	Net Tons	Capability Utilization*	Net Tons	Capability Utilization*	Net Tons	Capability Utilization*
		%		%		%		%		%
January	8,380	88.1	6,248	65.5	7,666	69.4	6,984	60.9	7,970	69.6
February	7,984	89.7	5,992	69.5	7,171	71.8	6,851	66.1	8,142	76.0
March	8,763	92.2	7,375	77.3	7,947	71.9	8,269	72.1	9,056	79.1
1st Quarter	25,141	90.1	19,619	70.8	22,808	71.5	22,083	66.3	25,057	74.6
April	8,398	91.4	7,402	80.3	7,787	73.5	7,872	71.6	8,997	80.8
May	8,832	93.1	7,641	80.2	7,616	69.5	7,830	68.9	9,174	79.8
June	8,031	87.4	7,349	79.7	6,730	63.5	7,292	66.3	7,945	71.4
2nd Quarter	25,261	90.7	22,391	80.1	22,133	68.8	22,993	68.9	26,116	77.4
First 6 months	50,370	90.3	41,933	75.3	44,966	70.0	45,110	67.7	51,354	76.2
July	8,313	88.0	7,324	77.3	6,352	59.2	7,010	62.1	7,460	65.3
August	8,181	86.6	7,494	79.1	5,668	52.8	7,130	63.2	6,915	60.5
September	8,237	90.1	7,694	83.9	5,644	54.3	6,924	63.4	6,378	57.7
3rd Quarter	24,730	88.2	22,512	80.1	17,665	55.4	21,064	62.9	20,752	61.2
9 months	75,075	89.6	64,587	77.1	62,603	65.1	66,164	66.1	72,054	71.1
October	8,332	87.7	8,073	84.4	6,087	56.8	7,351	65.2	6,703	58.4
November	7,883	85.8	7,882	85.2	5,860	56.5	7,051	64.7	6,422	57.8
December	7,954	83.8	7,916	82.8	5,877	54.9	6,728	59.7	6,013	52.4
4th Quarter	24,169	85.8	23,871	84.1	17,824	56.1	21,130	63.2	19,137	56.2
Second 6 Months	48,899	87.0	46,383	82.1	35,489	55.8	42,193	63.0	39,890	58.7
Year	99,924	89.2	89,151	79.5	81,606	63.8	88,259	66.1	92,528	68.4

*Raw steel production capability varies in each calendar quarter and aggregated 135.3, 133.6, 127.9, 112.2 and 112.0 million net tons for the full years 1984, 1985, 1986, 1987 and 1988 respectively.

†Totals include adjustments not shown in monthly figures.



**BASIC MATERIALS USED IN THE PRODUCTION OF IRON
AND STEEL PRODUCTS**

Table 27
Pig Iron Production, Consumption and Sales
 (Thousands of Net tons)

Year	Total Blast Furnace Production	Consumption		
		Steelmaking	Other than Outside Steelmaking	Sales
1988	55,745	54,833	702	564
1987	48,410	47,413	315	668
1986	43,952	43,312	357	283
1985	50,446	49,547	619	435
1984	51,904	45,282	1,499	792
1983	48,706	45,783	868	658
1982	43,309	42,013	777	568
1981	73,570	70,858	3,055	1,228
1980	68,721	66,111	2,794	1,206
1979	87,003	83,307	3,984	1,855

Table 28
Imports of Iron Ore By Countries of Origin

(Thousands of gross tons)

Country	1988 ^P	1987 ^R	1986	1985	1984
Brazil	4,760	3,640	3,693	2,540	2,542
Canada	8,946	7,854	8,651	8,557	11,161
Liberia	126	979	1,420	2,128	1,745
Venezuela	3,512	2,580	2,392	2,263	1,588
Other	2,436	1,530	593	457	124
Total	19,780	16,583	16,749	15,965	17,160

Source: U.S. Bureau of Mines

Table 29
Imports for Consumption of Manganese Ore by Countries of Origin
(35 Percent or More Mn)*

(MN content—Net tons)

Country	1988 ^P	1987 ^R	1986 ^R	1985 ^R	1984 ^R
Australia	34,439	48,747	35,539	43,104	21,005
Brazil	27,004	29,673	38,728	59,816	44,259
Gabon	146,654	88,413	119,068	64,093	66,135
Mexico	35,490	3,712	14,771	21,761	16,298
Republic of South Africa	...	...	13,988	...	17,286
Other Countries	94	31	3,514	66	40
Total	243,681	170,576	225,608	188,840	165,023

*Comprises ore received during the year for immediate consumption plus material withdrawn from bonded warehouses; excludes imports for manufacture in bond and export.

Source: U.S. Bureau of Mines, Department of Interior.

Table 30
Consumption of Coal
(Thousands of net tons)

Year	In Production of		Other Purposes	Total
	Coke	Steam*		
1988	33,827	1,682	261	35,770
1987	30,578	1,704	256	32,538
1986	28,836	2,206	240	31,282
1985	34,266	2,288	207	36,761
1984	35,815	2,368	212	38,395

*Includes coal consumed in generating electric power

Table 31
Consumption of Fluxes in Steelmaking
(Thousands of net tons)

Use	Fluorspar	Limestone	Lime	Other Fluxes	Total
1988					
In Steelmaking Furnaces:					
Open hearth:	20	210	26	199	455
Basic oxygen process	69	607	3,593	360	4,629
Electric	48	138	1,297	234	1,717
Total	137	955	4,916	793	6,801
1987	130	878	4,396	818	6,222
1986	146	809	3,925	845	5,725
1985	388	760	4,611	778	6,537
1984	250	920	4,158	793	6,121

Table 32
Production, Receipts, Consumption and Shipments of Coke

(Thousands of net tons)

	1988	1987 ⁿ	1986	1985	1984
Production					
Metallurgical	23,927	22,164	20,527	23,708	25,271
Other Coke	470	305	184	240	386
Total Production	24,397	22,469	20,711	23,948	25,657
Receipts, incl. imports	7,689	7,261	4,005	5,009	5,163
Total Production and Receipts	32,086	29,730	24,716	28,957	30,820
Consumption					
Blast furnaces	29,442	25,476	22,332	25,624	27,394
Foundries & Other	101	86	256	372	192
Total Consumption	29,543	25,562	22,588	25,996	27,586
Shipments to outside companies	2,637	2,683	955	2,012	2,260
Total Consumption and Shipments	32,180	28,245	23,543	28,008	29,846

Table 33
Consumption of Ore and Agglomerated Products

(Thousands of net tons)

	1988	1987	1986	1985	1984
Consumed In					
Blast Furnaces					
Natural Ore	5,682	2,972	2,087	3,201	N A
Pellets	67,268	54,564	48,072	56,987	58,749
Sinter, briquettes, nodules and other	17,082	15,895	14,574	17,838	18,907
Total	90,032	73,431	64,733	78,026	77,656
Steelmaking Furnaces—					
Natural Ore	214	136	72	99	N A
Pellets	97	48	34	68	56
Sinter, briquettes, nodules and other		46	28	90	37
Total	311	230	134	257	93
Total Consumption	90,343	73,661	64,867	78,283	77,749

Table 34
Scrap Consumption by Grade

(Thousands of net tons)

	1988 ^P	1987 ^R	1986	1985	1984
Carbon steel					
Low phosphorous plate and punching	413	326	361	336	324
Cut structurals and plate	1,825	1,329	1,351	1,523	1,375
No. 1 heavy melting steel	16,695	14,751	14,525	16,941	17,091
No. 2 heavy melting steel	4,437	3,839	3,522	3,604	2,665
No. 1 and electric furnace bundles	6,586	6,589	6,909	7,072	8,111
No. 2 and all other bundles	1,066	902	881	1,105	1,060
Turnings and borings	1,203	984	1,014	1,069	954
Slag scrap (Fe content)	2,820	2,430	2,147	2,815	3,276
Shredded or fragmented	5,498	4,842	4,259	4,043	3,134
No. 1 busheling	2,113	2,031	1,576	1,466	1,408
All other carbon steel scrap	8,915	9,139	8,797	8,468	7,415
Total Carbon Steel	51,571	47,162	45,342	48,442	46,813
Stainless steel	1,230	1,098	989	1,000	1,009
Alloy steel (excl. stainless)	992	965	1,146	1,256	1,315
Iron scrap	1,013	806	1,085	1,443	1,594
Other grades or types of scrap	1,453	1,633	1,101	1,059	1,055
Total scrap	56,259	51,665*	49,662	53,201	51,786

Source: U.S. Bureau of Mines

*U.S. Bureau of Mines indicates this number is understated by approximately 4.0 million net tons.

Table 35
Consumption of Scrap and Pig Iron
By Types of Furnaces

(Thousands of net tons)

Year	Type of Furnace	Consumed		Scrap Stocks on Total Hand Year End
		Scrap	Pig Iron	
1986 ^a	Open hearth	1,157	2,291	3,448
	Basic oxygen process	17,494	52,446	69,940
	Electric	34,345	248	34,593
	Cupola	—	163	163
	Direct castings	—	317	317
	Blast	3,007	—	3,007
	Other (Incl. air furnace)	257	26	283
	TOTAL	56,259	55,491	111,751
1987 ^a	Open hearth	1,137	†	1,137
	Basic oxygen process	15,692	46,741	62,433
	Electric	32,044	1,606	33,550
	Cupola	16	118	134
	Direct castings	—	460	460
	Blast	2,345	—	2,345
	Other (Incl. air furnace)	432	40	472
	TOTAL	51,665††	48,965	100,630
1988	Open hearth	1,556	2,325	3,881
	Basic oxygen process	14,753	41,582	56,335
	Electric	31,166	3	31,169
	Cupola	34	80	114
	Direct castings	—	297	297
	Blast	1,935	—	1,935
	Other (Incl. air furnace)	218	37	255
	TOTAL	49,662	44,324	93,986
1985	Open hearth	2,411	4,737	7,148
	Basic oxygen process	15,339	44,515	59,854
	Electric	32,252	5	32,257
	Cupola	20	73	93
	Direct castings	—	468	468
	Blast	2,481	—	2,481
	Other (Incl. air furnace)	698	37	735
	TOTAL	53,201	49,833	103,034
1984	Open hearth	3,724	5,718	9,442
	Basic oxygen process	16,447	45,551	61,998
	Electric	28,244	22	28,266
	Cupola	50	120	170
	Direct castings	—	482	482
	Blast	2,724	—	2,724
	Other (Incl. air furnace)	597	76	673
	TOTAL	51,788	51,989	103,755
				4,448

Source: U.S. Bureau of Mines.

†Incl. with electric.

††U.S. Bureau of Mines indicates this number is understated by approximately 4.0 million net tons.

Table 36
Consumption of Electric Power
(Millions of kilowatt hours)

Year	Generated	Purchased ^R	Total ^R
1988	6,869	36,566	43,435
1987	6,989	33,884	40,873
1986	7,910	30,012	37,922
1985	8,820	33,071	41,891
1984	6,763	38,325	45,088

Table 37
Consumption of Oxygen
(Millions of cubic feet in gaseous form)

	1988	1987 ^R	1986	1985	1984
Purchased	212,144	173,687	136,881	146,148	162,388
Produced (a)	9,498	11,903	16,744	17,341	14,049
Total	221,642	185,590	153,625	163,489	176,437
Used in:					
Conditioning	5,637	5,330	5,407	7,212	9,020
Scrap preparation	825	865	685	733	1,013
Other burning and welding	3,785	4,477	3,182	4,292	4,542
Blast furnaces	44,334	31,953	22,077	18,031	24,271
Steelmaking:					
Open hearth	7,937	3,867	5,633	10,795	15,869
Basic oxygen process	127,383	112,594	94,168	100,721	101,921
Electric	19,923	18,875	16,226	14,702	12,323
Total Steelmaking	155,243	135,336	116,027	126,218	130,113
Maintenance and construction	390	388	311	357	609
All other	11,428	7,241	5,936	6,646	6,869
Total	221,642	185,590	153,625	163,489	176,437

(a) Produced on companies owned or leased facilities.

NOTE: Oxygen consumed in liquid form was converted to its gaseous equivalent in these statistics.

Table 38
Consumption of Fuels

Year	Purpose					Total
	Blast Furnace Area		Steel Melting Furnaces	Heating and Annealing Furnaces	Other	
	Blast Furnaces	Other Uses*				
Fuel Oil (Thousand of gallons)						
1988	127,013	1,633	54,488	50,883	76,026	310,043
1987 ^R	140,225	3,380	44,114	34,616	50,203	272,538
1986	149,364	3,975	23,081	52,687	76,668	305,775
1985	99,674	3,583	48,390	29,125	52,625	233,397
1984	131,437	6,982	54,339	56,379	72,763	321,900
* Includes coke oven underfiring						
Tar and Pitch (Thousands of gallons)						
1988	43,417		4,037			47,454
1987 ^R	27,945		925			28,870
1986	5,248					5,248
1985	7,960		7,098			15,058
1984	8,952		15,690			24,642

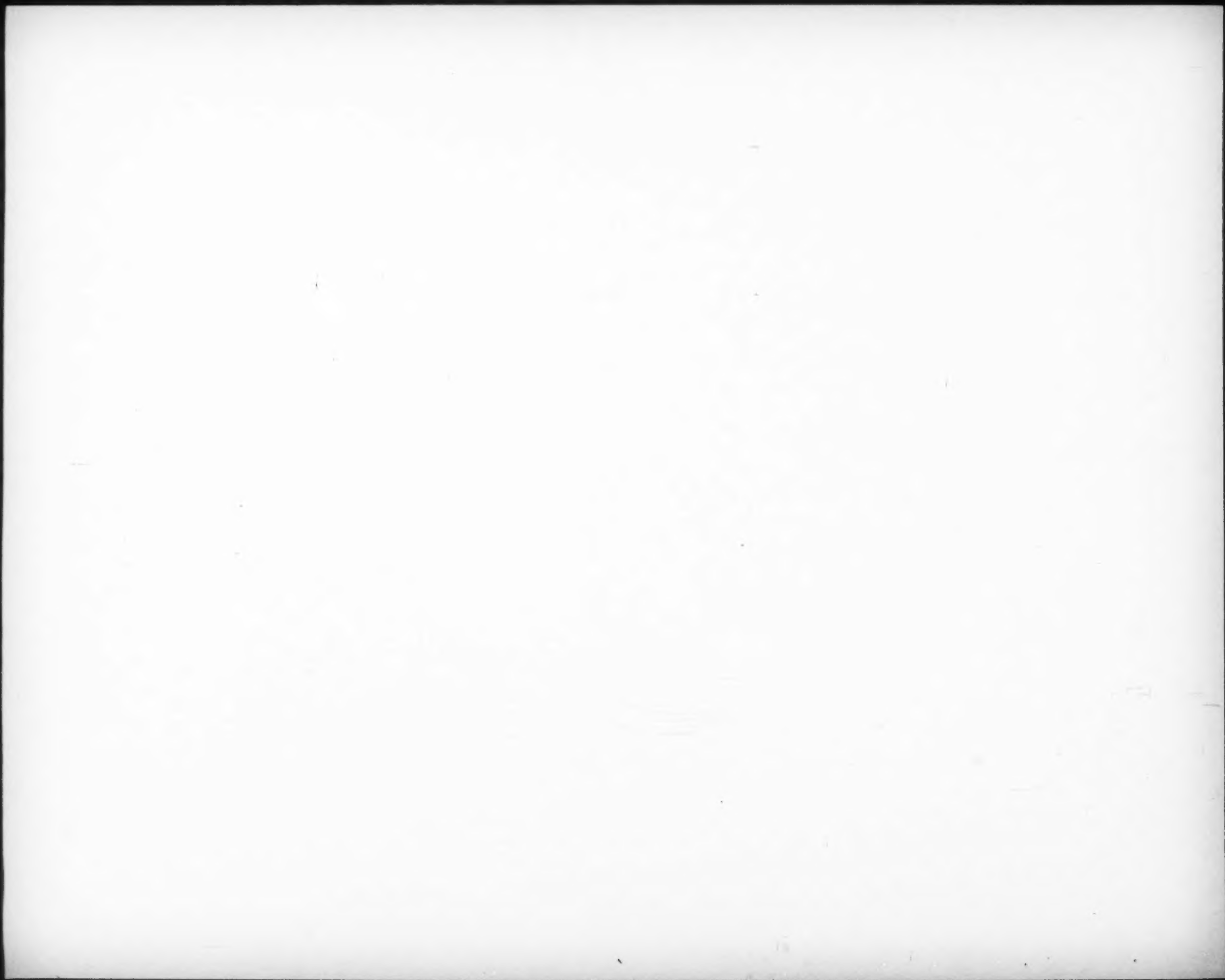
* Includes coke oven underfiring

Table 38 (continued)
Consumption of Fuels

Year	Purpose					Total
	Blast Furnace Area		Steel Melting Furnaces	Heating and Annealing Furnaces	Other	
	Blast Furnaces	Other Uses*				
Natural Gas						
(Millions of cubic feet—based on 1,000 B.T.U. per cubic foot)						
1988	52,046	6,045	20,469	255,338	105,675	439,573
1987 ^R	37,583	8,165	17,395	233,725	129,097	425,965
1986	23,650	5,991	15,182	175,295	88,793	308,911
1985	25,621	6,812	18,250	197,823	99,269	347,775
1984	29,235	10,542	20,688	228,082	102,676	391,223
Coke Oven Gas						
(Millions of cubic feet—based on 500 B.T.U. per cubic foot)						
1988	21,695	185,952	3,924	99,760	84,319	395,650
1987	16,768	143,861	2,211	97,122	90,817	350,779
1986	16,705	131,828	1,896	86,945	74,741	312,115
1985	18,687	151,437	485	100,892	101,699	373,200
1984	17,185	163,465	1,897	105,554	105,461	393,562
* Includes 130,211 coke oven underfiring in 1984, 117,074 in 1985, 106,669 in 1986, 125,681 in 1987, and 139,502 in 1988.						
Blast Furnace Gas						
(Millions of cubic feet—based on 95 B.T.U. per cubic foot)						
1988	864,500	422,927	...	27,700	1,102,307	2,417,434
1987 ^R	860,067	351,107	...	38,217	1,077,324	2,326,715
1986	585,703	334,935	887	30,787	902,156	1,854,468
1985	815,434	610,696	1,298	37,827	877,346	2,342,601
1984	873,752	674,791	1,386	41,243	793,539	2,384,711

* Includes 130,211 coke oven underfiring in 1984, 117,074 in 1985, 106,669 in 1986, 125,681 in 1987, and 139,502 in 1988.

* Includes coke oven underfiring.



CANADIAN STATISTICS

Table 39
Income, Dividends, Return on Sales and Stockholders' Equity

(Millions of Canadian dollars)
(Reported by companies comprising 79% of Canadian Raw Steel Production)

	1988 ^P	1987 ^R	1986	1985	1984
Statement of Income					
Revenues					
Sales (Net billing value of products shipped and other services)	\$7,051.8	\$6,235.9	\$5,642.4	\$5,909.4	\$5,723.1
Interest, dividends and other income	64.4	53.8	75.0	70.1	49.1
Total Revenue	7,116.2	6,289.8	5,717.4	5,979.5	5,772.2
Costs Applied to Billings and Other Services					
Employment costs	2,129.1	1,978.9	1,355.0	1,468.8	1,431.1
Materials, supplies, freight and other services, etc.	3,806.7	3,416.1	3,691.6	3,691.6	3,591.3
Depreciation, depletion and amortization	377.0	294.5	275.5	264.9	268.1
Interest and other financial costs	205.0	175.0	176.9	165.0	171.6
Taxes other than income		26.4	27.1	25.2	22.3
Taxes on income	195.1	133.3	61.9	111.6	89.0
Loss or (gain) on discontinued operations and sales of assets (a)		4.6			
Unusual items					
Total Costs	6,713.0	6,028.8	5,588.1	5,727.1	5,573.4
Extraordinary & other items net of taxes	(3.3)	5.0	(77.6)	(2.2)	(51.6)
Net Income	\$ 399.9	\$ 266.0	\$ 51.7	\$ 250.2	\$ 147.2
Percent Return on Sales	5.7	4.3	0.9	4.2	2.6
Percent Return on Stockholders' Equity (b)	11.3	7.3	1.4	6.8	4.1
Cash Dividends Declared	\$ 162.1	\$ 169.1	\$ 184.0	\$ 182.0	\$ 155.7
Employees	40,400	40,800	39,900	43,800	44,400

(a) Includes only pretax (gains) or losses which were separately disclosed in annual financial statements to stockholders.

(b) Based on stockholders' equity as of Dec. 31 of the prior year.

Table 40
Balance Sheet

(Millions of Canadian dollars)
(Reported by companies comprising 79% of Canadian Raw Steel Production)

Assets	1988 ^P	1987 ^R	1986	1985	1984
Current Assets:					
Cash and marketable securities	\$ 155.4	\$ 311.6	\$ 516.4	\$ 755.1	\$ 355.4
Receivables, less allowances	936.9	888.6	787.1	832.6	779.5
Inventories	1,831.2	1,550.2	1,618.6	1,807.0	1,778.5
Other Current Assets	6.1	26.1	14.1	18.0	11.5
Total Current Assets	2,929.6	2,776.5	2,936.1	3,412.7	2,924.9
Long-term receivables and other investments	188.7	337.1	190.6	292.5	280.4
Fixed assets:					
Property, plant and equipment	8,128.0	8,472.2	7,995.1	7,264.4	6,802.1
Less—Depreciation, depletion and amortization	3,134.5	3,829.4	3,631.4	3,301.7	3,046.8
Net Fixed Assets	4,993.5	4,642.8	4,363.7	3,962.7	3,755.3
Other assets	68.4	72.7	81.9	105.4	81.3
Total Assets	\$8,180.2	\$7,829.1	\$7,572.3	\$7,773.3	\$7,041.8
Liabilities and Stockholders' Equity					
Current Liabilities:					
Accounts payable	\$ 943.5	\$ 888.4	\$ 806.2	\$ 862.4	\$ 712.7
Accrued taxes, including income taxes	93.0	60.5	83.3	69.9	128.2
Long-term debt maturing within one year	71.6	38.8	66.7	46.1	43.3
All other current liabilities	28.9	35.4	37.5	92.3	34.1
Total Current Liabilities	1,137.1	1,023.2	993.7	1,070.8	918.3
Long-term debt less amount maturing within one year	2,033.2	1,772.8	1,586.6	1,666.7	1,526.1
Other long-term liabilities and reserves	1,439.6	1,138.0	931.8	886.4	832.6
Minority interest	36.3	—	—	—	—
Redeemable preferred stock	341.2	341.5	421.6	421.8	71.6
Stockholders' Equity:					
Preferred stock	190.7	514.2	713.6	718.2	801.8
Common stock	956.5	827.2	795.4	756.0	690.1
Income reinvested in business	2,045.6	2,212.3	2,129.6	2,253.5	2,201.3
Total Stockholders' Equity	\$3,192.8	\$3,553.7	\$3,638.6	\$3,727.6	\$3,693.2
Total Liabilities and Stockholders' Equity	\$8,180.2	\$7,829.1	\$7,572.3	\$7,773.3	\$7,041.8

Table 41
Production of Pig Iron

(Net tons)

Year	Pig Iron
1988	10,469,936
1987	10,713,572
1986	10,194,655
1985	10,654,200
1984	10,629,765
1983	9,442,986
1982	8,818,564
1981	10,740,258
1980	12,007,067
1979	12,021,433

Source: Statistics Canada

Table 42
Raw Steel Production
(Net tons)

Year	Open Hearth	Basic Oxygen Process	Electric	Total	Steel for Castings*	Continuous Cast Incl. in Total
1988	**	11,304,814	5,291,785	16,596,599	151,770	11,548,039
1987	**	11,262,068	4,855,940	16,118,008	126,639	7,953,948
1986	**	10,955,796	4,462,705	15,418,501	103,432	7,116,551
1985	**	11,633,276	4,385,334	16,018,610	116,293	7,037,419
1984	**	11,832,642	4,225,487	16,058,129	144,804	6,225,060
1983	1,014,966	9,364,629	3,650,893	14,030,488	114,752	5,292,981
1982	1,814,266	7,989,644	3,161,669	12,965,579	120,257	4,293,022
1981	2,203,771	9,567,252	4,363,641	16,134,664	191,747	5,258,275
1980	3,583,430	9,669,217	4,275,473	17,528,120	239,495***	4,489,581
1979	3,632,219	10,048,152	4,042,636	17,723,007	246,203	3,518,894

*Includes only that portion of the steel for castings which was produced in foundries operated by companies producing steel ingots.

**Included in Basic Oxygen

***Included in total 1980 and prior years

Source: Statistics Canada

Table 43
Net Shipments of Rolled Steel Products

(Net tons)

Products	1988	1987	1986	1985	1984
Ingots and semifinished shapes	433,314	388,123	297,654	406,540	594,400
Rails and heavy structural shapes	625,454	678,843	605,989	586,312	573,348
Wire rods	1,279,211	1,281,499	1,255,526	1,154,729	1,199,146
Structural shapes intermediate	387,401	405,817	362,852	352,425	324,346
Bar sized shapes	230,535	236,446	208,597	195,410	181,368
Concrete reinforcing bars	718,125	723,556	603,881	622,082	523,279
Other hot rolled bars	1,376,153	1,316,790	1,203,713	1,253,544	1,208,846
Tie plates and track material	28,325	24,243	42,264	54,163	75,271
Plates (Incl. plates for pipe & tube)	2,529,558	1,992,122	1,546,100	1,627,336	1,635,150
Hot rolled sheets & strip	3,125,045	3,246,182	3,130,728	3,020,767	3,047,059
Cold finished bars	171,310	157,802	144,003	130,642	135,967
Cold reduced sheets and strip, cold rolled other	1,663,477	1,578,544	1,560,742	1,559,933	1,521,493
Tin Plate & T F S	504,894	539,035	521,592	554,255	539,990
Galvanized sheets	1,545,374	1,483,977	1,371,207	1,336,334	1,182,101
Total net shipments	14,618,176	14,052,979	12,854,848	12,854,472	12,741,764

Table 43 (continued)
Net Shipments of Rolled Steel Products

(Net tons)

Products	1983	1982	1981	1980	1979
Ingots and semifinished shapes	824,174	578,736	1,098,708	897,005	551,343
Rails and heavy structural shapes*	505,527	454,257	925,608	862,691	380,919
Wire rods	1,129,709	989,851	1,088,166	1,363,294	1,257,889
Structural shapes intermediate**	287,179	238,106	391,404	458,798	919,602
Bar sized shapes	140,442	127,372	182,561	177,693	230,484
Concrete reinforcing bars	580,257	598,187	750,665	843,294	584,086
Other hot rolled bars	937,983	830,121	1,126,657	1,105,299	1,343,722
Tie plates and track material	55,080	63,033	74,934	87,256	79,021
Plates (Incl. plates for pipe & tube)	1,118,416	1,237,498	1,987,162	1,954,672	1,874,681
Hot rolled sheets & strip	2,328,771	2,203,371	2,506,978	2,557,134	2,818,510
Cold finished bars	99,227	75,258	104,763	108,224	130,704
Cold reduced sheets and strip, cold rolled other***	1,396,012	1,339,205	1,941,128	2,037,874	2,134,726
Tin Plate & T.F.S.	570,873	545,214	(Incl. in Cold Reduced Sheets & Strip)		
Galvanized sheets	1,046,692	1,025,365	1,047,999	1,099,256	1,175,237
Total net shipments	11,020,342	10,305,574	13,226,733	13,552,490	13,460,924

Source: Statistics Canada

*Prior to 1980, included only rails.

**Prior to 1980, included structural shapes and piling.

***Prior to 1982, included tin plate and T.F.S.

Table 44
Imports of Iron and Steel Products

(Net tons)

Products	1988	1987	1986	1985	1984
Steel Mill Products:					
Ingots, blooms, billets, etc	1,479,448	799,904	280,685	159,473	203,074
Wire rods	223,730	275,971	315,050	246,062	255,823
Structural shapes (plain 3" and over)	322,149	208,865	164,695	173,072	206,972
Sheet piling	9,981	3,970	2,181	9,458	8,625
Plates	379,977	224,489	184,976	255,052	208,856
Rails and track accessories	90,510	75,230	92,499	79,721	37,288
Concrete reinforcing bars	61,396	47,112	9,545	13,264	6,454
Bar shapes under 3"	43,486	58,853	52,109	70,652	48,274
Bars—Hot rolled	240,277	120,479	98,273	114,607	162,716
—Cold finished	28,530	19,886	20,490	21,699	18,189
Pipe and tubing	507,144	310,550	275,231	500,712	344,557
Wire drawn	†	67,995	66,758	66,707	59,923
Barbed wire	859	1,227	1,564	3,820	3,345
Wire nails	28,199	19,282	17,821	11,784	16,940
Tin plate	5,244	3,308	4,972	588	2,384
Terne plate	13,232	11,094	17,296	18,807	20,228
Sheets—Hot rolled	165,966	203,751	194,229	426,326	159,203
—Cold rolled	195,354	248,130	281,579	232,142	197,975
Sheet & strip (Coated, incl. galvanized)	342,627	311,514	266,757	180,831	129,574
All other sheet and strip	74,011	33,546	30,557	40,807	30,806
Total Steel Mill Products	4,212,120	3,045,156	2,377,267	2,625,584	2,121,206
Other Steel Products:					
Steel castings and forgings	N A	18,232	17,090	17,675	13,041
Bars and rods, fabricated	N A	5,748	6,336	5,616	5,954
Plates, flanged and dished	N A	1,755	1,694	1,906	1,643
Plates, sheets and strip for saws	N A	2,359	2,276	3,015	3,830
Plates, fabricated	N A	3,974	4,985	5,475	4,717
Sheet and strip, fabricated	N A	16,403	18,615	12,498	10,127
Structural shapes, fabricated	N A	8,320	9,156	3,183	2,972
Wire rope & strand††	139,174	27,227	29,491	28,465	23,002
Grinding balls	54,147	50,218	27,564	19,877	15,612
Total Other Steel Products	193,321	134,236	117,207	97,710	80,898
Total Steel Products	4,405,441	3,179,392	2,494,474	2,723,294	2,202,104
Iron Products and Ferrous Alloys:					
Pig iron	31,058	10,796	13,322	11,111	5,808
Sponge iron	1,969	1,736	1,783	2,662	3,195
Castings and forgings	N A	35,214	29,663	22,192	34,772
Pipes and tubes, cast iron	N A	11,963	2,674	1,224	3,821
Ferrous alloys	154,599	122,788	96,094	87,403	109,896
Total Iron Products and Ferrous Alloys	187,626	182,497	143,536	124,592	157,492
Grand Total	4,593,067	3,361,889	2,638,010	2,847,886	2,359,596

Source: Statistics Canada.

†Included in other steel products wire rope.

††Includes wire drawn.

Table 45
Exports of Iron and Steel Products

(Net tons)					
Products	1988	1987	1986	1985	1984
Steel Mill Products:					
Ingots, blooms, billets, slabs, etc.	198,767	114,742	257,307	84,560	274,523
Wire rods	374,289	392,580	397,695	355,215	368,609
Structural shapes and piling	282,450	315,446	371,557	320,360	277,979
Plates	448,766	435,840	213,232	186,415	197,132
Rail and track accessories	174,017	190,204	75,001	50,139	72,632
Bars—Hot rolled	551,258	388,296	329,567	326,424	284,114
—Cold finished	84,401	49,062	46,181	32,244	32,299
Pipe and tubing	520,159	532,858	397,387	477,510	445,167
Wire, plain and coated	290,613	214,753	212,956	180,928	183,435
Wire nails	83,523	83,969	106,867	86,118	68,337
Sheets and strip	873,677	1,214,529	1,136,379	1,157,096	882,997
Sheets and strip—Galvanized	182,327	277,826	270,591	277,731	316,111
Total Steel Mill Products	4,064,247	4,210,105	3,814,720	3,534,740	3,403,335
Other Steel Products:					
Bars and rods, fabricated	N A	15,131	25,025	20,403	14,369
Grinding balls	972	801	38	31	1,400
Castings and forgings	7,810	38,504	41,213	45,624	56,957
Wire rope and strand	18,979	7,276	5,922	9,306	7,357
Total Other Steel Products	27,761	61,712	72,198	75,364	80,083
Total Steel Products	4,092,008	4,271,817	3,886,918	3,610,104	3,483,418
Iron Products and Ferroalloys:					
Pig iron	391,300	492,680	572,720	632,850	432,256
Sponge iron	238,770	57,270	40,786	40,091	50,192
Iron castings	N A	114,297	91,288	88,763	96,411
Pipe and tubes, cast iron	5,573	3,763	1,330	2,153	8,604
Ferroalloys	70,245	67,547	112,238	95,063	54,456
Total Iron Products and Ferroalloys	705,888	735,557	818,362	858,920	641,919
Grand Total	4,797,896	5,007,374	4,705,280	4,469,024	4,125,337

Source: Statistics Canada

Table 46
Consumption of Coal
(Thousands of net tons)

Year	Total
1988	6 788
1987	6 854
1986	6 674
1985	6 901
1984	7 214
1983	6 229
1982	5 504
1981	6 937
1980	7 627
1979	7 688

Table 47
Consumption of Coke
(Thousands of net tons)

Year	In Blast Furnaces*	Total
1988	4 487	4 490
1987	4 809	4 809
1986	4 578	4 585
1985	5 009	5 011
1984	5 069	5 071
1983	4 635	4 636
1982	3 693	3 695
1981	4 283	4 285
1980	5 123	5 126
1979	4 859	4 863

*Blast furnaces producing pig iron and ferroalloys

Table 48
Consumption of Fuel Oil
(Thousands of gallons)

Year	In Melting Furnaces	In Heating and Annealing Furnaces	Other Purposes	Total
1988	54,908	6,943	16,176	78,027
1987	45,152	11,563	13,949	70,664
1986	36,763	11,096	13,276	61,135
1985	34,044	15,037	10,901	59,982
1984	49,668	19,555	6,339	75,562
1983	55,577	19,329	5,802	80,708
1982	73,801	20,227	10,793	104,821
1981	148,967	17,692	7,421	174,080
1980	145,451	21,088	17,030	183,569
1979	162,770	25,779	5,647	194,196

Table 49
Consumption of Fluxes in Steelmaking Furnaces
(Thousands of net tons)

Year	Fluorspar	Limestone	Lime	Other Fluxes	Total
1988	17	64	700	230	1,011
1987	20	57	700	217	994
1986	17	57	805	197	1,076
1985	21	73	763	229	1,086
1984	28	75	767	179	1,049
1983	24	67	748	159	998
1982	26	88	678	132	924
1981	29	89	786	122	1,026
1980	38	112	764	121	1,035
1979	33	130	821	131	1,115

Table 50
Consumption of Oxygen
(Millions of cubic feet)

	1988	1987	1986	1985	1984
Consumption By Uses:					
Conditioning	978	1,323	1,599	1,613	1,470
Scrap preparation	256	301	292	331	346
Other burning and welding	203	208	154	176	184
Blast furnaces	1,574	1,790	1,695	1,243	1,137
Steelmaking furnaces	22,223	22,328	21,791	22,752	22,289
Maintenance & construction	114	70	54	31	29
All other	1,350	1,787	1,074	976	1,174
Total	26,698	27,807	26,659	27,062	26,629

Table 51
Consumption of Pig Iron
(Thousands of net tons)

Year	Steelmaking	Other Than Steelmaking	Total
1988	9,525	91	9,616
1987	9,843	48	9,891
1986	9,374	41	9,415
1985	9,882	64	9,946
1984	9,975	223	10,198

WORLD STATISTICS

The following tables covering production of foreign countries were compiled from reports issued by Statistics Canada, and the International Iron and Steel Institute.

Table 52
World Production of Pig Iron by Countries
(Thousands of net tons)

Countries	1988 ^P		1987 ^R		1986 ^R		1985 ^R		1984 ^R	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
North America										
United States	55,745	9.5	48,410	8.7	43,952	8.0	50,446	9.2	51,904	9.6
Canada	10,470	1.5	10,714	1.9	10,195	1.9	10,654	1.9	10,630	2.0
Total	66,215	11.3	59,124	10.7	54,147	9.9	61,100	11.1	62,534	11.6
Latin America										
Argentina	1,775		1,931		1,791		1,443		984	
Brazil	26,044		23,518		22,435		20,901		18,993	
Chile	858		680		653		634		655	
Colombia	342		359		349		258		278	
Mexico	4,015		4,076		4,120		3,891		4,265	
Paraguay	84									
Peru	223		197		238		180			
Venezuela	558		519		541		485		358	
Total	33,897	5.8	31,281	5.6	30,128	5.5	27,792	5.1	25,533	4.7
Europe										
Western Europe										
EEC										
Belgium	10,086		9,082		8,869		9,642		9,933	
Luxembourg	2,779		2,541		2,921		3,036		3,051	
France	16,298		14,825		15,412		16,613		16,214	
Italy	12,551		12,495		13,115		13,297		12,821	
Netherlands	5,508		5,043		5,101		5,312		5,430	
Portugal**	601		584		579		572		522	
Spain**	5,114		5,308		5,300		6,015		5,863	
West Germany	35,149		30,992		31,518		34,329		32,779	
United Kingdom	14,297		13,246		10,676		11,444		10,458	
Total EEC	102,382	17.5	94,115	17.0	93,491	17.1	93,673	17.0	90,686	16.9
Other Western Europe										
Austria	4,039		3,804		3,692		4,083		4,128	
Finland	2,395		2,274		2,180		2,095		2,242	
Norway	405		401		622		672		631	
Sweden	2,749		2,551		2,684		2,672		2,440	
Switzerland	77		77		87		73		60	
Turkey	4,891		4,484		4,115		3,520		3,199	
Yugoslavia *	3,210		3,161		3,381		3,431		3,147	
Total Other Western Europe	17,766	3.0	16,753	3.0	16,761	3.1	23,133	4.2	22,232	4.1
Total Western Europe	120,147	20.5	110,868	20.0	110,252	20.2	116,805	21.2	112,918	21.0

* Communist Bloc

** 1984 and 1985 Included in other Western Europe total

Table 52 (continued)
World Production of Pig Iron by Countries

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WORLD
 Iron Ore

(Thousands of net tons)

Countries	1988 ^P		1987 ^R		1986 ^R		1985 ^R		1984 ^R	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Eastern Europe										
(Communist Bloc)										
Bulgaria	1,819		1,825		1,769		1,887		1,745	
Czechoslovakia	10,803		10,789		10,552		10,540		10,539	
East Germany	3,031		3,024		3,005		2,827		2,583	
Hungary	2,260		2,325		2,272		2,315		2,313	
Poland	11,023		11,048		11,129		10,290		10,508	
Romania	10,472		10,472		10,283		10,154		10,535	
U.S.S.R.	125,662		125,552		125,486		121,228		122,237	
Total Eastern Europe	165,069	28.2	165,035	29.7	164,496	30.1	159,242	29.0	160,460	29.7
Total Europe	285,216	48.7	275,903	49.7	274,748	50.3	276,047	50.2	273,378	50.7
Africa										
Zimbabwe	501		617		710		743		441	
South Africa, Republic of	6,737		6,963		6,365		6,625		6,097	
Algeria	1,433		1,433		1,543		1,543		1,268	
Tunisia	171		171		157		165		165	
Other	22		22		22		22		22	
Total	8,964	1.5	9,206	1.7	8,797	1.6	9,098	1.7	7,993	1.5
Middle East										
Iran	276		276		276		276		276	
United Arab Republic (Egypt)	1,047		1,047		1,047		1,047		1,060	
Total	1,323	0.2	1,323	0.2	1,323	0.2	1,323	0.2	1,336	0.2
Far East										
India	12,907		12,040		11,590		10,847		10,455	
Japan	87,407		80,929		82,288		88,811		88,628	
Pakistan	998		998		987		885		606	
South Korea	13,872		12,188		9,924		9,737		9,659	
Taiwan	6,256		4,032		4,123		3,780		3,624	
Thailand	11		11		11		11		11	
Total	121,451	20.7	110,198	19.9	108,923	20.0	114,071	20.7	112,983	20.8
Far East (Communist Bloc)										
China	56,217		55,335		55,049		47,997		44,160	
North Korea	6,504		6,504		6,393		6,338		6,338	
Total	62,721	10.7	61,839	11.1	61,442	11.3	54,335	9.9	50,498	9.4
Oceania										
Australia	6,308	1.1	6,150	1.1	6,452	1.2	6,172	1.1	5,869	1.1
Total World	586,095	100.0	555,024	100.0	545,960	100.0	549,938	100.0	540,125	100.0

NOTE: Detail does not necessarily add to totals.

Source: United States—American Iron and Steel Institute; Canada—Statistics Canada; Other Countries—International Iron and Steel Institute.

Table 53
World Production of Raw Steel by Countries
(Thousands of net tons)

Countries	1988 ^P		1987 ^R		1986		1985		1984	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
North America										
United States	99,924	11.6	89,151	11.0	81,606	10.3	88,259	11.1	92,528	11.8
Canada	16,597	1.9	16,118	2.0	15,419	2.0	16,019	2.0	16,058	2.1
Total	116,521	13.6	105,269	13.0	97,025	12.3	104,278	13.1	108,586	13.9
Latin America										
Argentina	3,993		3,979		3,566		3,247		2,918	
Brazil	27,133		24,502		23,405		22,546		20,266	
Chile	987		793		778		751		761	
Colombia	799		762		697		579		553	
Cuba *	496		468		459		441		373	
Mexico	8,591		8,346		7,904		8,004		8,247	
Peru	551		502		537		456		371	
Venezuela	3,979		4,103		3,750		3,368		3,053	
Others	745		632		558		353		366	
Total	47,274	5.5	44,087	5.4	41,651	5.3	39,745	5.0	36,908	4.7
Europe										
Western Europe										
EEC										
Belgium	12,390		10,827		10,707		11,776		12,456	
Luxembourg	4,033		3,640		4,084		4,348		4,395	
Denmark	716		667		697		582		604	
France	20,947		19,500		19,684		20,740		20,944	
West Germany	45,209		39,956		40,933		44,640		43,418	
Ireland	298		243		229		224		183	
Italy	26,090		25,153		25,223		26,314		26,524	
Netherlands	6,109		5,602		5,823		6,081		6,326	
United Kingdom	20,958		19,208		16,231		17,330		16,668	
Greece	1,064		1,000		1,113		1,086		990	
Portugal**	884		795		783		740		772	
Spain**	12,880		13,021		13,098		15,699		14,878	
Total EEC	151,578	17.6	139,612	17.2	138,605	17.6	133,121	16.8	132,507	16.9
Other Western Europe										
Austria	5,034		4,741		4,731		5,137		5,368	
Finland	3,080		2,942		2,851		2,776		2,909	
Norway	1,000		937		933		1,041		1,010	
Sweden	5,268		5,065		5,198		5,305		5,186	
Switzerland	909		959		1,185		1,088		1,078	
Turkey	8,832		7,769		6,534		5,456		4,773	
Yugoslavia *	4,927		4,814		4,982		4,938		4,669	
Total Other Western Europe	29,050	3.4	27,227	3.4	26,414	3.3	42,170	5.3	40,643	5.2
Total Western Europe	180,628	21.0	166,839	20.6	165,019	20.9	175,291	22.1	173,150	22.1

* Communist Bloc

** Prior to 1986 included in other Western Europe

Table 53 (continued)
World Production of Raw Steel by Countries

(Thousands of net tons)

Countries	1988 ^a		1987 ^a		1986		1985		1984	
	Tons	%	Tons	%	Tons	%	Tons	%	Tons	%
Eastern Europe										
(Communist Bloc)										
Bulgaria	3 307		3 355		3 194		3 225		3 172	
Czechoslovakia	16 975		16 993		16 658		16 574		16 348	
East Germany	9 094		9 086		8 782		8 655		8 348	
Hungary	3 858		3 999		4 095		4 020		4 135	
Poland	18 739		18 898		18 898		17 776		18 224	
Romania	16 535		16 493		15 736		15 206		15 914	
U.S.S.R.	180 777		178 501		177 123		170 474		170 008	
Total Eastern Europe	249,285	29.0	247,319	30.5	244,486	31.0	235,930	29.8	236,149	30.2
Total Europe	429,913	50.0	414,158	51.1	409,505	51.9	411,221	51.9	409,299	52.3
Africa										
Zimbabwe	664		658		743		806		466	
Republic of South Africa	9 647		9 620		9 805		9 377		8 523	
Others	2 041		2 036		2 046		1 211		1 114	
Total	12,352	1.4	12,314	1.5	12,594	1.6	11,394	1.4	10,103	1.3
Middle East										
Egypt	1 874		1 764		1 102		1 047		1 268	
Saudi Arabia	1 505		1 505		1 213		1 219		928	
Iran	1 378		1 378		1 213		1 323		1 323	
Others	928		891		901		918		849	
Total	5,685	0.7	5,538	0.7	4,429	0.6	4,507	0.5	4,368	0.6
Asia										
India	15 652		14 438		13 445		12 724		11 628	
Japan	116 482		108 591		108 329		116 049		116 387	
South Korea	21 069		18 499		16 044		14 924		14 367	
Taiwan	9 163		6 379		6 112		5 609		5 520	
Others	5 456		5 462		4 802		4 196		3 252	
Total	167,822	19.5	153,369	18.9	148,732	18.9	153,502	19.4	151,154	19.3
Asia (Communist Bloc)										
China	65 036		61 751		57 209		51 504		47 751	
North Korea	7 441		7 418		10 130		9 259		7 165	
Total	72,477	8.4	69,169	8.5	67,339	8.5	60,763	7.7	54,916	7.0
Oceania										
Australia	6 944		6 724		7 357		7 285		6 947	
New Zealand	551		451		316		250		309	
Total	7,495	0.9	7,175	0.9	7,673	1.0	7,535	1.0	7,256	0.9
Total Free World	532,354	61.9	494,309	60.3	471,682	59.8	490,873	61.9	486,483	62.2
Total Communist Bloc	327,185	38.1	319,770	39.7	317,266	40.2	302,072	38.1	296,107	37.8
Total World	859,539	100.0	814,079	100.0	788,948	100.0	792,945	100.0	782,590	100.0

NOTE: United States data excludes steel produced by foundries; follows 1988—1,015^b; 1987—830^b; 1986—829, 1985—854—940, (in thousands of net tons).

SOURCE: United States—American Iron and Steel Institute, Canada—Statistics Canada. Other Countries—International Iron and Steel Institute.